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Academia	ACCURATE project	ACoustic CUe RATEs; aims to deliver comprehensive, quantitative synthesis of current state of knowledge on acoustic cue rates & cue stability for marine mammal density estimation from passive acoustics	https://accurate.st- andrews.ac.uk/	Tiago Marques, University of St Andrews	St Andrews	Scotland	bioacoustics data analysis/viz marine/aquatic
roadornia	Account the project	citizen science portal for Swedish flora & fauna	https://www.artportalen.	Swedish Agricultural	Styllidions.	Cocidano	citizen science education images software
Academia	Artportalen	observations/identifications	se/ https://www.uno.	University (SLU)			video academic lab
Academia	Atriya Sen's Lab	research includes AI for taxonomic analysis & mapping, AI for sustainability & bioinformatics	edu/profile/faculty/atriya_sen	Atriya Sen, University of New Orleans	New Orleans, Louisiana	USA	AI/ML education
Academia	Belongie Lab	research in Computer Vision & Machine Learning, exploring problem areas including fine-grained analysis of multimodal data, self-supervised learning, 2D/3D generative models & augmented reality	https://www.belongielab.	Serge Belongie, University of Copenhagen	Copenhagen	Denmark	academic lab Al/ML education images video
Academia	Benno Simmons's Lab	research includes AI for bioacoustics, camera traps, remote sensing & ecological network analysis, especially as distributions shift under climate change	https://www.bennosimmons.com/	Benno Simmons, University of Exeter	Exeter, England	UK	academic lab AI/ML bioacoustics camera trap climate education images remote sensing software video
		research includes ecological forecasting & decision making under uncertainty, conservation & natural resource management, applying			, J		academic lab Al/ML climate
Academia	Boettiger Group	deep reinforcement learning for conservation decisions	info/	Carl Boettiger, UC Berkeley	Berkeley, California	USA	education
Academia	Center for AI in Society	researching ideas about how AI can be used to tackle societal problems (conservation & sustainability being one, also disaster planning)	https://cais.usc.edu/_	Bistra Dilkina, Eric Rice, Univ of Southern California	Los Angeles, California	USA	academic lab Al/ML data analysis/viz
Academia	Center for Conservation Bioacoustics	makers of Swift (terrestrial passive acoustics) & Rockhopper (marine passive acoustics) recorders, plus Raven software (for bioacoustic analysis)	https://www.birds.cornell.edu/ccb/technology/	Holger Klinck, Laurel B. Symes, Cornell University	Ithaca, New York	USA	academic lab bioacoustics data analysis/viz data management education hardware marine/aquatic software terrestrial
Academia	Center for Global Discovery & Conservation Science	collection of research labs at Arizona State University; research includes coral reef conservation technology, mitigating & adapting to climate change, spectral imaging	https://qdcs.asu.edu/	Greg Asner, Arizona State University	Hilo, Hawai'i, Phoenix, Arizona	USA	academic lab climate data analysis/viz data management drones/AUV's education geospatial images marine/aquatic remote sensing
	Center for Research on	lab research includes PAWS, ML for conservation with UAVs,	https://crcs.seas.harvard.				academic lab AI/ML camera trap data management drones/AUV's education local capacity building software tracking/telemetry
Academia	Centre for Statistics in Ecology, the Environment & Conservation	develop methods that link data analysis & modelling to conservation planning & management; provide hub connecting statisticians & biologists; projects include climate change modelling, ranger-collected data analysis, population change in marine predators; hosts large online stats toolbox educational resource	http://www.seec.uct.ac.	Millind Tambe, Harvard University of Cape Town	Cambridge, Massachusetts Cape Town	South Africa	wildlife crime prevention academic lab data-/bio-logging data analysis/viz data management education events marine/aquatic terrestrial

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Academia	Chuck Stewart's Lab	academic lab applying computer vision techniques to a variety of environmental monitoring challenges - motion analysis, reidentification, 3-D reconstruction & continual curation of data; advisor for computer vision research at WildMe	https://science.rpi. edu/computer- science/faculty/chuck- stewart	Chuck Stewart, Rensselaer Polytechnic Institute	Troy, New York	USA	academic lab AI/ML camera trap data analysis/viz data management education geospatial images tracking/telemetry video
Academia	Computational Vision Laboratory	focused on computer vision, fine-grained categorization, object tracking & re-identification; project "Visipedia" produced iNaturalist & Merlin Bird ID to to identify species of plants & animals from photos	http://www.vision.caltech.edu/	Pietro Perona, California Tech Univ	Pasadena, California	USA	academic lab AI/ML citizen science data analysis/viz eDNA/genetics education images mobile app software terrestrial
Academia	Computer Vision Group at University of Jena	research includes species identification, individual re-identification in images, & active learning	https://www.inf-cv.uni- jena.de/denzler#cv-ml	Joachim Denzler, University of Jena	Jena	Germany	academic lab Al/ML data analysis/viz education images
Academia	David Rolnick's Lab	research includes ML applied to climate change, biodiversity projects including species ID & remote sensing for ecosystem monitoring	https://davidrolnick.com/	David Rolnick, McGill University & Mila	Montreal, Quebec	Canada	academic lab Al/ML climate education
Academia	dulog	maker of biologgers with focus on low-weight tags, logging proximity data between animals, miniaturized tags (<1 gram), configurable & customizable tags; remote data download options; tested mostly on bats	https://dulog.net/#	Institute of Electronics Engineering, University of Erlangen-Nuremberg	,	Germany	data-/bio-logging hardware terrestrial tracking/telemetry
Academia	EcoVision Lab	machine learning for environmental sciences & geosciences - including remote sensing & urban forestry	https://prs.igp.ethz. ch/ecovision.html	Jan Dirk Wegner, Swiss Federal Institute of Technology in Zürich (ETH Zürich)	Zürich	Switzerland	academic lab AI/ML climate education geospatial images remote sensing
Academia	Environmental Computational Science and Earth Observation Lab	research on multimodal remote sensing, aerial censuses, species distribution modeling, environmental AI, makers of AIDE software	https://www.epfl. ch/labs/eceo/	Devis Tuia, Swiss Federal Institute of Technology (EPFL)	Lausanne	Switzerland	academic lab AI/ML climate education geospatial images remote sensing software
Academia	Ermon Group	research applies AI & ML to sustainability, poverty mitigation, food security & renewable energy	https://cs.stanford. edu/~ermon/website/	Stefano Ermon, Stanford University	Stanford, California	USA	academic lab Al/ML education geospatial images remote sensing
Academia	Frants Jensen's Lab	research includes ML for cetacean communication, animal-bourne biologging tags, & anthropogenic noise effects on marine animals	https://frantsjensen. weebly.com/	Frants Jensen, Syracuse University	Syracuse, New York	USA	academic lab AI/ML bioacoustics data-/bio-logging data analysis/viz education marine/aquatic
Academia	Helsinki Lab of Interdisciplinary Conservation Science	interdisciplinary team with expertise in conservation science, geography, computer science, social sciences & economics; developing methods to investigate human-wildlife interactions & wildlife trade & to inform policy making	https://www2.helsinki. fi/en/researchgroups/hels inki-lab-of- interdisciplinary- conservation-science		Helsinki	Finland	academic lab AI/ML data analysis/viz data management education local capacity building terrestrial tracking/telemetry
Academia	Imageomics Institute	collaborative research, training, and community-facing environment for extracting existing & new biological traits from images of organisms, with the necessary cyber-, information, and model development infrastructure; developing machine learning tools to analyze animal imagery	https://imageomics.osu.edu/	Ohio State University	Columbus, Ohio	United States	AI/ML education images networking software

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Academia	Jetz Lab	research includes ML For species distribution/niche modeling, remote sensing, data synthesis, species interaction networks	https://jetzlab.yale. edu/people/walter-jetz	Walter Jetz, Yale University	New Haven, Connecticut	USA	academic lab Al/ML camera trap data analysis/viz education geospatial
Academia	Kanazawa Al Research (KAIR) Lab	research includes animal modeling in 3D ("Three-D Safari"), pose estimation & analysis	http://people.eecs. berkeley.edu/~kanazawa/	Angjoo Kanazawa, UC Berkeley	Berkeley, California	USA	academic lab AI/ML data analysis/viz education images tracking/telemetry video
Academia	Karen Joyce's Lab	remote sensing, aerial (UAV) monitoring; counting sea cucumbers & other indicators of oceanic/coastal environments for temporal ecosystem surveys	https://www.kejoyce.com/	Karen Joyce, James Cook University	Townsville	Australia	academic lab Al/ML data management drones/AUV's education geospatial remote sensing
Academia	Marine Geospatial Ecology	focus on data analysis, modeling linking biological, satellite & ocean observing data to develop analysis & visualization tools that inform marine management & conservation, maintain free, open-source geoprocessing toolbox (MGET) integrated with ArcGIS; run OBIS-SEAMAP	https://mgel.env.duke.	Duke University	Durham, North Carolina	USA	academic lab data analysis/viz data management geospatial marine/aquatic open-source remote sensing software tracking/telemetry
Academia	Marine Landscape Ecology	specialize in the use of geospatial technologies & spatial analyses to study the relationship between habitat, disturbance & species distribution in marine communities; involved in regional Ocean Observing Stations	https://csumb.edu/mlel/	California State Univ- Monterey Bay	Monterey, California	USA	academic lab data analysis/viz education geospatial marine/aquatic remote sensing tracking/telemetry
		interdisciplinary research lab - relevant topics include sustainable	https://www.media.mit.	Dava Newman (directory),			academic lab Al/ML climate education geospatial
Academia Academia	MIT Media Lab Oisin Mac Aodha's Lab	research includes "Shazam for Bats"; work on fine-grained image analysis as part of the team that developed the iNaturalist Challenge Datasets & self supervised monocular depth estimation (Monodepth)	https://homepages.inf.ed.	Oisin Mac Aodha, University of Edinburgh	Cambridge, Massachusetts Edinburgh, Scotland	UK	remote sensing academic lab AI/ML bioacoustics camera trap education images terrestrial
Academia	Predator-Prey Ecology lab	long-term studies of interactions between forest predators & prey; their demography, spatial ecology, occupancy & resource selection using passive bioacoustics, camera trapping & mark-recapture	https://www.damonlesmeister.com/	Damon Lesmeister, Oregon State University	Corvallis, Oregon	United States	academic lab bioacoustics camera traps terrestrial
Academia	Rebecca Hutchinson's Lab	research includes species distribution modeling, occupancy modelling using ML; methods for analyzing species interaction networks	http://web.engr. oregonstate.edu/~rah/	Rebecca Hutchinson, Oregon State University	Corvallis, Oregon	USA	academic lab Al/ML citizen science education images
Academia	Sandin Conservation Tech Lab	develop data collection & analytical pipelines for large-area imaging of coral reefs; houses Center for Environmental Imaging-software consulting firm providing 3D image-based modeling of large-scale environments		Stuart Sandin, Univ of California-San Diego & Scripps Oceanographic Institute	San Diego, California	USA	academic lab consulting data analysis/viz education geospatial images marine/aquatic remote sensing
Academia	Schmidt Center for Data Science & Environment	unifying the power of data, computing & environmental science; building tangible, replicable & accessible solutions to problems compromising the health of our environment	https://ds4e.berkeley.	University of California, Berkeley	Berkeley, California	United States	data analysis/viz

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Academia	Shima Abadi's Lab	research includes understanding ambient ocean noise, community science annotations, animal bioacoustics, graph signal processing	https://sites.google.com/a/uw.edu/abadi/research?authuser=0	Shima Abadi, University of Washington Bothell	Bothell, Washington	USA	academic lab AI/ML bioacoustics climate citizen science education marine/aquatic mobile app
Academia	SLU Moose Research	moose tracking program with online visualization tool that shows movement patterns of tagged moose; https://wram.slu.se/public	https://www.slu.se/moose-research	Goran Ericsson, Swedish University of Agricultural Sciences (SLU)	Umea	Sweden	academic lab data analysis/viz education geospatial GPS terrestrial tracking/telemetry
Academia	Sound Forest Lab	passive acoustic monitoring projects in Borneo, Gabon, Madagascar, Papua New Guinea for conservation (monitoring endangered species, soundscapes, human activity like logging)	https://www. soundforestlab.org/	Zuzana Burivalova, University of Wisconsin- Madison	Madison, Wisconsin	USA	academic lab bioacoustics terrestrial wildlife crime prevention
Academia	Spatial Points lab	collection of notes on remote sensing, spatial science, and solutions to problems encountered from team that specializes in range of GIS, image processing & remote sensing applications	http://www.spatialpoints.	Spatial Sciences Group, Unmanned Research Aircraft Facility (University of Adelaide)	Adelaide	Australia	education geospatial images open-source remote sensing
		use remote sensing, GIS, ecological modeling & multi-objective decision support systems to understand spatial variability, temporal dynamics, change & interrelationships in natural and managed	https://set.adelaide.edu. au/biological- sciences/research/ecolog y-environmental-	Morgan Lewis & Bertram Ostendorf (University of			academic lab AI/ML data analysis/viz geospatial GPS
Academia Academia	Spatial Sciences group Tanya Berger-Wolf's Lab	ecosystems, terrestrial & marine environments Computational Ecology lab - research includes social network analysis & population census through re-identification. Dr. Berger-Wolf is also on the board of directors at WildMe.	https://cse.osu.edu/people/berger-wolf.1	Adelaide) Tanya Berger-Wolf, Ohio State University	Adelaide Columbus, Ohio	Australia	remote sensing academic lab AI/ML camera trap education images marine/aquatic terrestrial
Academia	Toke T. Høye Lab	research includes image-based tools for identifying & monitoring insects & flowers & biotic interactions between them with the use of computer vision & deep learning; special focus on the Arctic		Toke Høye, Aarhus University	Aarhus	Denmark	academic lab AI/ML climate education images
Academia	Unmanned Research Aircraft Facility	drone operator training & education provider; offer short courses & training opportunities; provide research & consultancy services &	https://www.adelaide.edu.au/environment/uraf/	Ramesh Raja Segaran, University of Adelaide	Adelaide	Australia	academic lab drones/AUV's education events hardware images
Academia	Upham Lab of Phylogenetic Ecology	research includes AI for taxonomic analysis & mapping; lead the Mammal Diversity Database; improving Mammal Tree of Life based on GBIF, GenBank, etc.; building knowledge graph for mammal host-pathogen interactions	https://n8u.org/	Nate Upham, Arizona State University	Tempe, Arizona	USA	academic lab Al/ML eDNA/genetics education
Academia	Wildlife Coexistence Lab (WildCo Lab)	research areas: mammal community dynamics in altered ecosystems, coexisting with large carnivores, population estimation & monitoring		University of British Columbia, Dr. Cole Burton	Vancouver, British Columbia		academic lab AI/ML camera traps data analysis/viz data management education GPS images
Community	Acoustic Tracking Array Platform	collaborative listening station array on Southern African coast- nationwide marine science platform to track tagged animals, use acoustic telemetry	https://saveourseas. com/project/the-acoustic- tracking-array-platform- atap/	Save Our Seas		South Africa	bioacoustics hardware marine/aquatic open-source remote sensing tracking/telemetry
Community	Africa GeoPortal	bringing together GIS users across Africa (from Esri); geospatial tools, open data, & learning resources	https://www. africageoportal.com/				education geospatial local capacity building networking open-source remote sensing

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Community	African Drones	community of African drone pilots & engineers for sharing resources, group-buys, drone journalism, virtual events	https://africandrone.org/		Capetown Dar es Salaam	South Africa Tanzania	events drones/AUV's funding local capacity building networking
		global initiative to use AI to fast-track humanity's response to climate change; open data, forums, lightning talks & resources			Madrid New York	Spain USA	AI/ML education climate events
Community	Al for Climate	around using Al for climate	https://www.forclimate.ai/		Mexico City, Guadalajara	Mexico	jobs
Community	Al for Conservation Slack community	a forum for discussing AI applications to conservation, asking questions & they have a #jobs channel	https://join.slack. com/t/aiforconservation/s hared_invite/zt-9e1a80pf- Ez0UK51jYv1Lgd~Hwyy 5Zw	: Sara Beery			AI/ML education funding hardware jobs software
		research collab with 20 organizations & 70+ scientists focusing on AI & geospatial data, particularly ethics, temporal/spatial reasoning		500.0			Al/ML geospatial marine/aquatic remote sensing software
Community	Al for Earth Observation	& inference & quantifying uncertainties	https://ai4eo.de/			Germany	terrestrial AI/ML
Community	Al for Environment & Sustainability (ARIES)	aims to put sohpisticated modeling capabilities at fingertips of non- technical users & decision-makers; have trainings to learn platform; quantifying benefits that nature provides to society (ecosystem services, natural capital accounting, mapping); collaborative cloud- based environmental	https://aries. integratedmodelling.org/				consulting data analysis/viz events geospatial local capacity building
Community	Alberta Biodiversity Monitoring Institute	data & analytics portal with species/habitat datasets & mapping products, NatureLynx citizen science app, WildTrax platform for managing/storing/processing/sharing biological & environmental sensor data	https://www.abmi. ca/home.html		Alberta	Canada	camera trap citizen science data-/bio-logging data analysis/viz data management mobile app remote sensing
Community	Animal Telemetry Network	regionally distributed data collection, management & sharing capacity; centralized data assembly center currently located at Axiom Data Science; regional telemetry data aggregated in single place with access to all U.S. national animal telemetry data	https://atn.ioos.us/	IOOS (Integrated Ocean Observing System)			data management geospatial GPS open-source remote sensing software tracking/telemetry
Community	Animal relementy Network		https:	Observing Oystem)			
Community	ARCS	Arenas for cooperation through citizen science; Swedish national hub for citizen science	//medborgarforskning. se/eng/			Sweden	citizen science networking
Community	Bio Bridge	program focused on catalyzing & facilitating technical & scientific cooperation, access & benefit-sharing among Parties to the CBD; creating a space (interactive web platform) for countries & institutions to share knowledge, good practices & lessons learned with each other; seed funding program, events, virtual helpdesk	https://www.cbd. int/biobridge/	Convention on Biological Diversity (CBD), Korean government			education events funding local capacity building networking software
Community	BIOSCAN	three research themes: employ DNA barcodes to speed species discovery (generate barcode coverage for 2M species), to probe species interactions (targeting the symbiome), & to track species dynamics (scan biological communities at 2,000 sites)	https://ibol. org/programs/bioscan/	International Barcode of Life			data-/bio-logging data management eDNA/genetics marine/aquatic networking terrestrial
Community	BioTrack	collaborative network to assess & monitor biodiversity hotspots where marine megafauna share habitat; maps & tracks hotspots through biotelemetry, biologging; record remotely sensed environmental data & essential ocean variables (EOVs)	https://marinebon. org/pages/biotrack/	Animal Telemetry Network, Marine Biodiversity Observation Network, Neil Hammerschlag, Chelsea Black			data analysis/viz data management geospatial GPS marine/aquatic networking remote sensing tracking/telemetry
Community	Cadasta	provides technical tools & Services to support documentation of I& & resource rights, particularly by indigenous communities who are living on I& with no formal rights or ownership; building global Cadasta Trainer network; has grant program	https://cadasta.org/				education funding geospatial local capacity building software

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Community	Citclops	develop systems to retrieve & use data on seawater color, transparency, etc. using low-cost sensors combined with people as data carriers, georeferencing, & community-based platform (integrated with Coastwatch Europe, Oil Reporter, etc.)	http://www.citclops.eu/home		Barcelona	Spain	citizen science data-/bio-logging education GPS data management marine/aquatic networking
Community	Climate Central	independent group of scientists & communicators who research & report facts about changing climate & how it affects people's lives; policy-neutral non-profit: Climate Matters program - provides local	https://www. climatecentral.org/		Princeton, New Jersey	USA	climate data management education
Community	Climate Change Al	global initiative to catalyze impactful work at intersection of climate change & machine learning; workshops, resources; has repository of workshop papers; maintains CCAI Wiki; has virtual happy hours every 2 weeks	https://www. climatechange.ai/	Priya Donti, Lynn Kaack, David Rolnick			Al/ML education events funding networking
Community	Computational Sustainability Network	research network of 13 institutions exploring new research directions in computational sustainability.	https://www.compsust.net/	Cornell University	Ithaca, New York	USA	academic lab Al/ML data analysis/viz networking
Community	Conservation Measures Partnership	creates conservation standards (principles & practices for effective conservation) & maintains conservation measures partnership to guide practice of conservation; maintains database of evidence-based conservation initiatives & their outcomes	https://www. conservationmeasures. org/	Nature Conservancy, WWF, WCS, Conservation Intl, Foundations of Success			education data management software
Community	Conservation Tech Working Group	platform for discussion, collaboration & coordination of research & activities around use of different technologies in conservation	https://conbio. org/groups/working- groups/conservation- technology-working- group/	Society for Conservation Biology			education events networking
Community	Dawn Chorus	citizen science project started during COVID-19 pandemic that invites people around the world to collect bird songs for biodiversity research, art & building conservation awareness; has mobile app & online platform		BIOTOPIA – Naturkundemuseum Bayern, Landesbund für Vogelschutz			bioacoustics citizen science education mobile app terrestrial
Community	Deep Faune	collaborative project to develop an automatic recognition tool for animal species in France; have annotated image database with >400,000 images & videos; can classify humans, vehicles, empty images, and 18 common species; software to use model being developed	https://www.deepfaune.	Simon Chamaillé-Jammes, Vincent Miele, Bruno Spataro, Noa Rigoudy		France	Al/ML camera traps data analysis/viz images terrestrial video
		open-access/open-source geospatial data platform for African continent; integrated with AfriGEO; has online training; Africa GeoPortal (Esri) imagery; Sandbox (access to data & analysis tools	https://www.				data analysis/viz data management education events images local capacity building geospatial networking
Community	Digital Earth Africa	for geospatial reporting)	digitalearthafrica.org/				open-source drones/AUV's education
Community	DIY Drones	leading community for personal UAVs has online community to connect & learn from other users; toolkit with 'ToolFinder', Mapeo (app for documenting environmental info & collecting data (can be used offline on desktop app & mobile), Terrastories (place-based storytelling) & Community Lands	https://www.	Chris Anderson Digital Democracy, Alianza Ceibo, Amazon Conservation Team, Amazon Frontlines, ECA Amarakaeri, Forest Peoples Programme, Open Development Initiative, Raks			hardware data management education geospatial local capacity building
Community	Earth Defenders toolkit	(website management tool for communities to publish info, stories, projects)	earthdefenderstoolkit. com/	Thai & South Rupununi District Council			mobile app networking bioacoustics
Community	Echospace	ocean acoustics & data science group focusing on extracting knowledge from ocean acoustic data, particularly water column sonar data & echolocation	https://uw-echospace. github.io/	Univ of Washington	Washington	USA	data-/bio-logging marine/aquatic tracking/telemetry
Community	Encosh	international knowledge-sharing & exchange platform for human- wildlife interactions & strategies to mitigate conflict; aims to increase engagement between stakeholders & make info more readily available & accessible	https://encosh.org/en/				education local capacity building networking wildlife crime prevention
Community	ENRAM	European Network for the Radar surveillance of Animal Movement; multidisciplinary research network to foster continental-scale remote sensing of animal migration	http://www.enram.eu/				data-/bio-logging networking remote sensing tracking/telemetry

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Community	EUROMAMMALS	umbrella project that coordinates & connects different species- specific, bottom-up projects that promote collaborative science based on knowledge & data sharing to investigate spatial ecology of European wildlife	https://euromammals.org/				data-/bio-logging data management geospatial remote sensing
Community	European Tracking Network	pan-Euro initiative to integrate all aquatic animal tracking/biotelemetry systems in 1 network; 2000 deployments, 500 million detections	http://www.europeantrackingnetwork.org/	AtlantOS, LifeWatch, COST (European Cooperation in Science & Tech)			data-/bio-logging marine/aquatic remote sensing tracking/telemetry
·		collaboration of marine scientists using acoustic telemetry & other tech to research & conserve America's fish & sea turtles (& marine		SECOORA (Southeast Coastal Ocean Observing			bioacoustics
Community	FACT Network	areas more broadly) global citizen science project for monitoring lakes, rivers & wetlands; take samples which are used to extract mineral levels,	https://secoora.org/fact/ https://freshwaterwatch.	Regional Association)			marine/aquatic citizen science data management hardware
Community	Freshwater Watch	turbidity, etc. provides AI education for the world's most pressing challenges;	thewaterhub.org/	Earthwatch Europe			marine/aquatic AI/ML climate consulting drones/AUV's education GPS images networking remote sensing
Community	FruitPunch Al	partners with organizations; topics include poaching prevention, coral reef conservation, wind energy, earth observations	https://fruitpunch.	Buster Franken, Sako Arts	Eindhoven	The Netherlands	terrestrial wildlife crime prevention
Community	GEO BON	Group on Earth Observations, Biodiversity Observation Network; building pathway to link biodiversty data & metadata to GEOSS [environmental data] to provide decision-support tools to users implementing Essential Biodiversity Variables, monitoring guidelines & data management systems; BONs now for China, Colombia, France, Arctic, Americas, Asia-Pacific, Marine, Freshwater, Soil	https://geobon.org/	Group on Earth Observations, iDiv, German Science Foundation	Lindioven	The Neurenands	consulting data management data analysis/viz geospatial networking software
Community	Global Dialogue on Seafood Traceability	international business-to-business platform to advance a unified framework for interoperable seafood traceability practices, improve reliability of seafood info, reduce cost of traceability, reduce supply chain risk, & contribute to long-term social & environmental sustainability of the sector	https://traceability-dialogue.org/				consulting data management education marine/aquatic networking
Community	Global Partnership for Sustainable Development Data	global network using data to achieve the SDGs, build collaborations		Secretariat (team w/ members in Conakry, Lagos, Nairobi, Brussels, London, New York, Washington DC)			data management climate funding networking
Community	GoodAl community	empowering companies that use AI to help deliver on SDGs; online discussion boards, company directory, job board, responsible AI resources	https://thegoodai.co/	,			Al/ML consulting education funding jobs networking
Community	Green Tech Alliance	support green tech companies that put planet before profit; brings together green tech businesses to support them with advice about funding, impact, visibility & strategy	https://www.greentech.				consulting education events funding networking
Community	ILTER	International Long Term Ecological Research; "network of networks" encompassing >600 sites globally across 39 country networks; has small grants program; maintained through Dynamic Ecological Info Mgmt System (DEIMS);	https://www.ilter.network/	Hideaki Shibata, Michael Mirtl	Vienna	Austria	data-/bio-logging data management funding networking
Community	IMOS	Integrated Marine Observing System; national research infrastructure from Australian government; delivers high-quality marine & climate data to stakeholders for use in research & operational activities; consists of ocean radar, animal tracking, onship monitoring, deep water moorings, ocean gliders, mooring network, remote sensing, marine microbiome measuring	https://imos.org.au/	National Collaborative Research Infrastructure Strategy/	Hobart	Tasmania	climate data-/bio-logging data management eDNA/genetics hardware marine/aquatic remote sensing software tracking/telemetry

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	Integrated Ocean Observing	integrated network gathering observing data & developing tracking & predictive tools; have grant opportunities; has model viewer (data visualization platform, generate time series analyses), has profiling		NOAA (National Oceanic &			climate data analysis/viz data management funding geospatial GPS marine/aquatic networking open-source remote sensing software
Community	System	gliders; data catalog; environmental sensor map	https://ioos.us/	Atmospheric Administration)	Silver Spring, Maryland	USA	tracking/telemetry data-/bio-logging
Community	International Bio-logging Society	brings together researchers interested in bio-logging & telemetry methods in aquatic, terrestrial & aerial environments;	https://www.bio-logging.				education events funding marine/aquatic networking terrestrial tracking/telemetry
Community	International Quiet Ocean Experiment	program to promote research, observations & modelling to improve understanding of ocean soundscapes & effects of sound on marine organisms	https://www.igoe.org/	Scientific Committee on Oceanic Research, Partnership for Observation of the Global Ocean, Intergovernmental Oceanographic Commission			marine/aquatic networking bioacoustics data analysis/viz
			https://www.ispotnature.				citizen science education images networking software
Community	iSpot	citizen science community helping to identify wildlife & share nature	org/	The Open University Dr. Sue Lowerre-Barbieri,			video data-/bio-logging
Community	iTag Network	collaboration to improve understanding of animal migration & residency in the Gulf of Mexico; >2200 animals tagged with 1118 receivers	https://myfwc. com/research/saltwater/t elemetry/itag/network/	Florida Fish and Wildlife Conservation Commission, Fish and Wildlife Research Institute, University of Florida	Florida	USA	data his regains data management geospatial GPS marine/aquatic tracking/telemetry
	Lifeplan	bring together key expertise needed to generate & interpret Big Ecological Data for a global synthesis of biotic patterning globally, uniting community ecology, methods for automated species recognition & Bayesian statistics for immense data; network of sites	https://www2.helsinki. fi/en/projects/lifeplan/abo	University of Helsinki	Helsinki	Finland	bioacoustics camera traps data analysis/viz data management networking remote sensing
Community	сперіап	with continuous, standardized sampling	<u>ut</u>	Offiversity of Heisinki	rieisiliki	Fillialiu	terrestrial data analysis/viz
Community	LifeWatch ERIC	distributed research infrastructure consortium; has catalogue of virtual labs (R Shiny data explorer, microCT virtual galleries & 3-D analysis tools, ecological modeling), metadata catalogue, training catalogue, Ecoportal (repository of semantic resources for ecology)	https://www.lifewatch.eu/	7 EU member-states: Belgium, Greece, Italy, Netherlands, Portugal, Slovenia, Spain			data management education images networking software
Community	MammalWeb	trap or upload their own camera trap data	https://www. mammalweb.org/en/	Durham University, Durham Wildlife Trust, Emily Baker, Sian Green, Sammy Mason, Jonathan Rees	Durham, England	UK	camera trap citizen science data management education images terrestrial
Community	Marine Biodiversity Observation Network	growing global initiative composed of regional networks of scientists, resource managers, & end-users working to integrate data from existing long-term programs to improve our understanding of marine biodiversity; expanding application of remote sensing methods, novel molecular (eDNA) technologies; has US MBON & global MBON; hosts data portals	https://marinebon.org/	US MBON (NOAA, NASA, IOOS offices) & global MBON (GEO BON)			data management eDNA/genetics networking remote sensing tracking/telemetry
Community	MD4SG Environment and Climate Working Group	multi-institutional initiative using techniques from algorithms, optimization, & mechanism design, along with insights from other disciplines, to improve access to opportunity for historically underserved & disadvantaged communities	https://www.md4sg. com/workinggroups/envir onment.html	founded: Rediet Abebe & Kira Goldner/maintain: Irene Lo, Ana-Andreea Stoica, Lily Xu, Wanyi Li, Francisco Marmolejo			AI/ML education local capacity building networking
Community	MegaMove	standardized dataset of tracked marine megafauna movements via bio-logging data; global network of researchers collecting & sharing data	https://megamove.org/	Ana M. M. Sequeira, Australian Research Council, University of Western Australia	Perth	Australia	data-/bio-logging data management GPS marine/aquatic tracking/telemetry

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Community	NEON	US National Ecological Observatory Network; provides ecological data from sites across the continent to quantify ecological processes over time & space; coordinates local measurements with airborne remote sensing data; 47 terrestrial sites, 34 freshwater aquatic field sites	https://www.neonscience.	National Science Foundation			data-/bio-logging data management geospatial hardware marine/aquatic remote sensing terrestrial
Community	Ocean Tracking Network	global monitoring network for oceans management; leveraging international collaborations, data warehousing, aquatic animal tracking network (>2000 acoustic tracking stations deployed)	https://oceantrackingnetwork.org/	Dalhousie University		Canada	data management marine/aquatic networking remote sensing tracking/telemetry
Community	ODK-X	community that produces free & open-source software for collecting, managing & using data in resource-constrained environments; can build custom data mgmt apps	https://odk-x.org/	Jeff Beorse, Raquel Bernedo, Waylon Brunette, Ben Green, Li Lin, Caroline Krafft, Emil Rossing		Canada	data management open-source mobile app software
Community	Open Environmental Data	working to create better data management practices & collaborative governance structures for environmental data to be easily accessed & used		Shuttleworth Foundation			data management data analysis/viz education
Community	Open Repar Alliance	international group of community repair organizations committed to longer-lasting electronic products; have open repair data standards	https://openrepair.org/	Anstiftung, Fixit Clinic, iFixit, Repair Cafe, restart			hardware networking education events
Community	SeaBee	creating cohesive national network; Norwegian infrastructure for drone-based research, mapping & monitoring in coastal zones; developing ML pipelines for drone data	https://seabee.no/			Norway	data analysis/viz drones/AUV's hardware networking
Community	Silent Cities project	participatory monitoring programme of urban soundscapes during COVID-19 lockdowns; analysis via: https://github.com/brain-bzh/SilentCities	https://osf.io/h285u/	full author list in link		·	bioacoustics citizen science data analysis/viz networking
·		collaborative effort to sample mammal populations with camera traps in sites in all 50 US states across habitats & development zones; data management through Wildlife Insights; anyone can	https://emammal.si.				camera trap citizen science images
Community	Snapshot USA	contribute if using the standardized methods global community for those using geospatial tech for conservation	edu/snapshot-usa	eMammal			terrestrial education events funding
Community	Society for Conservation GIS Species360	of biodiversity, natural environments & cultural heritage facilitates international collaboration in collection, sharing & analysis of knowledge on wildlife; curate Zoological Information Management System (ZIMS); integrates data from IUCN, CITES, TRAFFIC, Edge, etc.	https://www.scgis.org/ https://www.species360. org/	Mgmt team: Jim Guenter, Dalia, Conde, Peter Donlon, Nate Flesness, Elisabeth Hunt, Doug Verduzco	N/A Minneapolis, Minnesota (HQ)	USA	networking data analysis/viz data management networking software
Community	TEAM Network	Tropical Ecology Assessment & Monitoring; merged with Wildlife Insights; uses standardized methods (camera-trapping a big one) to collect near-real time data on biodiversity, climate & land-cover change in 17 sites across Africa, Asia & Latin America; created to establish an early warning system for tropical forests		Conservation International, WCS, Smithsonian Institute	(ing)	004	camera trap hardware images local capacity building networking terrestrial video
· · · · •		Ecosystem Research Infrastructure; measure key terrestrial ecosystem attributes over time at hundreds of field sites across		Univ of Queensland, Univ of Adelaide, Csiro, James			data-/bio-logging data management hardware networking software terrestrial
Community	TERN Australia	Australia & openly provide model-ready data to researchers aims to broaden use of environmental DNA for management & conservation, smooth path to widespread use by making technology & knowledge more accessible; has grants program,	https://www.tern.org.au/	Cook Univ Ryan Kelly, University of		Australia	tracking/telemetry academic lab eDNA/genetics funding
Community	The eDNA Collaborative WILDHUB	visiting scholars program international community of conservation professionals; provide a space to exchange ideas, make new partnerships, & create new solutions; has job board channel & events channel	https://wildhub.community/	Washington	Seattle, Washington	USA	networking education events jobs networking

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Community	WILDLABS.NET	a community of conservationists, technologists, engineers, data scientists, entrepreneurs & change makers. Together, we share information, ideas, tools & resources to discover & implement technology-enabled solutions to some of the biggest conservation challenges facing our planet.	http://wildlabs.net/	Conservation International, FFI, Royal Foundation, WCS, WWF, ZSL			bioacoustics camera trap education events funding hardware networking jobs local capacity building remote sensing software
Community	WildTrack Specialist Group	community within WildTrack for conservationists & biologists using non-invasive technologies to monitor & protect endangered species	https://wildtrack. org/wildtrack-specialist-	Wildtrack			bioacoustics camera trap images networking remote sensing video
Community	WOCAT	World Overview of Conservation Approaches & Technologies (WOCAT); global network on Sustainable L& Management that promotes documentation, sharing & use of knowledge to support innovation & decision-making; maintain Global SLM database; host workshops & other events	https://www.wocat.	International secretariat with regional & national partners & institutional members			consulting data management education events networking software
Community	Xeno-Canto	citizen-science website for sharing bird sounds from around the world; can share your own recordings, help ID mystery recordings & share knowledge in forums	https://www.xeno-canto.	Conservation International, FFI, Royal Foundation, WCS, WWF, ZSL, Arm, Google			bioacoustics citizen science data management education images networking open-source video
Company	A/Vian Eco	consultancy specializing in terrestrial wildlife biology & bioacoustics surveys	https://avianeco.com/	Tyne Baker	Calgary, Alberta	Canada	bioacoustics consulting data management education events local capacity building terrestrial
Company	Acorn Camera	camera trap & outdoor camera retailer; some models can send images back to your computer or phone when something is detected	https://acorncamera.com/		Shenzhen	China	camera trap hardware images terrestrial
Company	Adafruit	electronics hardware maker, online platform for learning electronics	https://www.adafruit.com/		New York City, New York	USA	education events hardware IoT open-source
Company	Advanced Telemetry Systems	ATS; tracking devices - transmitters, receivers, antennas, GPS/satellite, dam fish sensors, remote dataloggers; have tiny options for insects/bats/etc	https://atstrack.com/index.html		Isanti, Minnesota	USA	data-/bio-logging GPS hardware marine/aquatic remote sensing terrestrial
Company	Africa Wildlife Tracking	provide near real-time GPS tracking devices (tags/collars/horn implants, receivers, towers, satellite systems, accessories [antennas, cables, switch boxes]); have software & reporting dashboard	https://awt.co.za/		Pretoria	South Africa	data-/bio-logging data analysis/viz data management GPS hardware marine/aquatic remote sensing terrestrial tracking/telemetry
Company	Al Digital World	Protected & Conservation Area Suite (PCA-Suite) is a galaxy of tools custom developed & comes along with a tablet (turn key approach). We looking for partners for funding & collaborations esp. those of global repute.	https://aidigitalworld.com			Singapore	Al/ML climate consulting funding software
Company	ai.fish	suite of Al tools for monitoring sustainable fish farms; has data management system too	http://www.ai.fish/				Al/ML images marine/aquatic software video

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		drone-based reforestation; combating climate change & biodiversity		Andrew Walker, Andries			AI/ML climate hardware drones/AUV's
Company	Airseed Technology	loss by combining drone technology, AI & seed pod bio-technology	https://airseedtech.com/	Louw		Australia	terrestrial AI/ML
Company	apic.ai	monitoring technology quantifies the behaviour of insects such as bees & bumblebees; to detect effects of substances, agricultural practices & environmental factors on pollinators	apic.ai		Karlsruhe	Germany	camera trap data-/bio-logging IoT video
Company	Applied Ocean Sciences	collective of ocean consultants doing oceanographic research with passive acoustics, marine mammal conservation, modeling ocean parameters; collaborate with academic, government & nonprofit partners	http: //appliedoceansciences. com/	Kevin Heaney	Fairfax Station, Virginia	USA	bioacoustics climate consulting data analysis/viz marine/aquatic remote sensing
Company	Appsilon	data science consultancy providing R Shiny solutions, open-source packages & machine learning products; reduced or pro-bono rates when projects aligned with Data for Good mission	https://appsilon.com/company/	Olga Mierzwa-Sulima	Warsaw	Poland	Al/ML camera trap climate consulting data analysis/viz open-source software
Company	Argos	satellite constellation used often for terrestrial, marine & avian GPS tracking; worldwide location & data collection system dedicated specifically to studying/protecting environment	https://www.argos- system.org/applications- argos/wildlife-monitoring/	CLS			data-/bio-logging geospatial GPS hardware remote sensing tracking/telemetry
Company	Arm	tech company & AI ecosystem funding/helping lots of conservation projects, climate tech, BearlD project, RFCx	https://www.arm.com/		Global HQ-Cambridge US HQ-San Jose, California	UK USA	AI/ML bioacoustics climate data analysis/viz funding hardware images IoT software
Company	Ashored	developers of sustainable technologies for commercial fishing; minimizing the risk of whale entanglements & trap loss/damage	https://ashored.ca/	Aaron Stevenson, Ross Arsenault	Debert, Nova Scotia	Canada	consulting data-/bio-logging drones/AUV's GPS hardware marine/aquatic mobile app software tracking/telemetry
Company	Atlas Scientific	environmental robotics maker; includes sensors for terrestrial, marine, & climate parameters; wifi-enabled instruments; Atlas iot converts Raspberry Pi into water monitoring system	https://atlas-scientific.		New York City, New York	USA	climate data-/bio-logging hardware marine/aquatic terrestrial
Company	Baotree	sustainability impact project management tools for data collection, verification, dashboards, data management, collaboration & communication	https://baotree.io/		3.1.3.1,	Kenya	data-/bio-logging data management mobile app open-source software
Company	Beewise	robotic Al-based beehive that houses 24 colonies; keepers can remotely treat hives & care for bees; solar-powered; climate controlled, pest controlled, automated harvesting, real-time alerts	https://www.beewise.ag/	Saar Safra		•	Al/ML data analysis/viz hardware images remote sensing software terrestrial video

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		makes dataloggers for acceleration, depth, temperature, geolocation, hydrophone (& integrated video logger); own analysis	https://biologging-	Biosphere Info Lab, Kyoto			bioacoustics data-/bio-logging data analysis/viz data management GPS hardware marine/aquatic tracking/telemetry
Company	Biologging Solutions Inc	system; different battery options	solutions.com/en/	Univ; Takuya Koizumi		Japan	video
Company	Bioverse Labs	patented Precision Biodynamics system - AI powered tech enabling farmers & governments to monitor species population dynamics in real-time; uses smart low-cost IoT sensors, BIOMAP app; used in agriculture, urban environments, & to monitor invasive species	https://www.bioverselabs.com/				Al/ML consulting hardware IoT mobile app software terrestrial
Company	DirdDet	"using AI to power citizen science"; camera trap hardware being designed; for bird species ID, can contribute data to research, bird	https://www.bird.bot/				AI/ML citizen science software
Company	BirdBot	seed refill reminders drone company that automates visual inspections (for solar farms, wind turbines, cell towers, etc.); also have worked with anti-	https://www.bird.bot/				hardware consulting drones/AUV's
Company	Birds Al	poaching efforts mapping & data analysis org; helps story-tell through interactive mapping tech; can deploy Insights for ArcGIS, get spatial statistics, business intelligence, configure mobile apps, GIS analysis, build	https://www.birds.ai/		Delft	the Netherlands	hardware data analysis/viz data management geospatial marine/aquatic
Company	Blue Raster	web apps, deploy/migrate to cloud, integrate content management systems	https://www.blueraster.		Arlington, Virginia	USA	mobile apps software terrestrial
Company	Browning	camera-trap company; prices \$100-\$300; options for solar power, GSM remote data download	https: //browningtrailcameras. com/collections/trail- cameras				camera trap hardware images video
Company	Buckeye Cam	camera trap company; has networked cameras; \$670-\$1100; has its own demo & cam management software with Al image recognition embedded, makes base stations; can connect seismic & magnetic sensors;	https://www. buckeyecameras.com/		Athens, Ohio	USA	camera trap hardware images IoT video
		camera-trap company; prices \$100-\$300; has \$100 solar panel	https://www.bushnell.				camera trap hardware images
Company	Bushnell	plug in, cellular data download options	com/trail-cameras-2/		Kansas	USA	video camera trap hardware
Company	Campark	camera-trap company; prices \$55-\$140; has \$65 solar power bank plus in option; has Wifi & Bluetooth connectivity options	https://www.campark. net/collections/frontpage		China		images video
		works with forest industry's biggest customers & suppliers to develop business solutions that protect endangered forests; particularly fashion industry (CanopyStyle campaign), packaging (Pack4Good), paper alternatives (Ecopaper database), printer					climate
Company	Canopy Planet	sustainability ranking, etc. data-driven, digital detection platform to support shipping companies, freight forwarders, cargo handlers & relevant authorities manage risk from illegal wildlife trade; tools to detect	https://canopyplanet.org/ https://www.cargoscreen.		Vancouver	Canada	consulting AI/ML consulting software
Company	CargoScreen Cefas Technology Ltd	illicit wildlife in cargo design & manufacture data-loggers for wildlife conservation; have archival loggers & electronic data capture system; have dive-	https://www.	Centre for the Environment, Fisheries, & Aquaculture Science (CEFAS)	Zurich	Switzerland	wildlife crime prevention data-/bio-logging GPS hardware marine/aquatic terrestrial tracking/telemetry
Company	Cellular Tracking Technologies	telemetry research tech, GSM/Argos/radio transmission, GPS/accelerometry, & inertial data; cloud portal to manage trackers, analyze data & visualize movement; can export to MoveBank	https://celltracktech.com/		New Jersey	USA	data-/bio-logging data analysis/viz data management GPS hardware tracking/telemetry

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Company	Ceres	biotelemetry tag manufacturer; specialize in long-term ear tags for large mammals; satellite remote data download	http://cerestag.com/			Australia	data-/bio-logging GPS terrestrial tracking/telemetry
Company	CLASlite	sensing tech for monitoring tropical deforestation & forest degradation; automated system for converting satellite imagery from its original (raw) format, through calibration, pre-processing, atmospheric correction, data analysis, & classification to derive high-resolution output images; has free webinars to learn it help food & agriculture businesses build climate resilience, improve	https://claslite.org/	i-Cultiver, Inc.	Tracy, California	USA	consulting data analysis/viz events geospatial GPS images remote sensing software terrestrial AI/ML
Company	ClimateAl	profitability & sustainably intensify production with customer- specific supply chain insights	https://climate.ai/	Himanshu Gupta, Max Evans			climate consulting
Company	CLS	Collect, Localize, Satellites; operate Argos & Iridium satellite systems, water resource monitoring, I& management; aircraft & drone imagery	https://www.cls.fr/en/		HQ in France, offices globally	France	drones/AUV's geospatial images remote sensing software hardware
Company	Comon Solutions	mission is to provide deep geospatial analytics to fill information gaps & reduce monitoring costs for ecosystem conservation-species id, ecological monitoring, geological assessment; Al-driven processing, derived 3-D info, interpret complex GIS info for clients;	https://www.comon. solutions/	Ross Davison, Christopher Knight, Alex Reinhold			AI/ML consulting data analysis/viz data management geospatial GPS images marine/aquatic remote sensing software terrestrial
Company	Connect Earth	convert purchase data to carbon footprint estimates; show users impact of their purchases on environment & empower them to reduce their footprint by making more sustainable purchasing decisions	https://www.connect.earth/		London	UK	climate consulting data analysis/viz
Company	Conservation Metrics	automated alternatives to wildlife survey efforts, combining remote- sensing, machine learning; for-profit model, do a lot of work for gov't agencies	https: //conservationmetrics.com/		Santa Cruz, California	USA	AI/ML consulting data-/bio-logging data analysis/viz data management geospatial remote sensing
Company	ConservationAl Hub	automated detection of fauna from drones & camera traps & analysis of vegetation at multiple scales using Al; initial focus on koalas; portal for community groups and agencies from Australia to leverage top tier infrastructure and expertise	https://conservationai.	Queensland University of Technology		Australia	Al/ML camera traps data analysis/viz drones/AUV's geospatial images software terrestrial
Company	Coral	complete toolkit to build products with local AI; on-device inferencing capabilities/embedded devices; can deploy offline, privacy protocols; solutions for on-device intelligence include object detection, pose estimation, image segmentation & key phrase detection; has pre-compiled models	https://coral.ai/	lecinology		Australia	AI/ML geospatial hardware IoT images software
		digital survey tool/drag-and-drop builder; platform that enables you to build your own data collection apps without needing technical	https://coreo.	Dava Kilbay		IIV	citizen science data management
Company	Coreo (ecology)	knowledge; have ecology-focused options	io/sectors/ecology/	Dave Kilbey		UK	mobile app camera trap hardware images IOT
Company	Covert Csiro Robotics & Autonomous Systems Group	LoRA trail cam systems + individual cameras (\$70-\$310) Zebedee makers, lead Project ResQu; robotics & autonomous systems research group; pioneer in application of 2D & 3D o simultaneous localisation & mapping (SLAM) tech	https://research.csiro. au/robotics/		Brisbane	Australia	video data-/bio-logging geospatial hardware remote sensing

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Company	Cuddeback	camera trap company; has Cuddelink proprietary wireless mesh network (transmits images from up to 15 cams to 1 "home" camera; cam to cam range up to 1/4 mile in forest (\$250-\$550)	https://www.cuddeback.		Wisconsin	USA	camera trap hardware images IoT video
Company	Custom Animal Tracking Solutions (CATS)	makers of the CATS Cam (multi-sensor videologger + accelerometer tag), Diary GPS tags, mini-tags (5g); use GSM & satellite wireless data transfer; have app to program/monitor tags, data management web portals & movement visualizer software	https://www.cats.is/	Nikolai Liebsch, Peter Kraft	Queensland, Oberstdorf	Australia, Germany	data-/bio-logging data analysis/viz data management GPS hardware marine/aquatic mobile app software terrestrial tracking/telemetry video
Company	DeerLab	cloud-based application for camera trap image processing/organization & analysis; includes heat mapping, photo recognition, filtering, animal profiles, analytics, weather syncing, multi-users, bulk upload & more	https://deerlab.com	Jon Livingston, Ryan Wood	Jacksonville, Florida	USA	AI/ML camera trap climate data-/bio-logging data analysis/viz data management GPS images software
Company	Descartes Labs	geospatial analytics company with SaaS platform providing actionable intelligence powered by geospatial data available at planetary scale; addressing issues such as climate chance, food security, & sustainability	https://descarteslabs.com/	<u> </u>	Los Alamos National Lab scientists	USA	climate consulting geospatial images remote sensing software
		makers of underwater passive acoustic recorders (SonarPoint), wildlife satellite tags (can be incorporated with magnetometers, accelerometers, spawning detection sensors; uses Argos), acoustic release, ropeless fishing & positioning systems; working on mesh	https://www.desertstar.				bioacoustics data-/bio-logging GPS hardware IoT marine/aquatic
Company	Desert Star Systems Digital Globe	sensing networks for their devices commercial vendor of high-resolution Earth imagery, data & analysis; global coverage & 16-year time-lapse image library; acquired by MAXAR Technologies?	https://www.digitalglobe.com/	Marco Flagg	Monterey Bay, California Colorado	USA	tracking/telemetry data analysis/viz geospatial hardware remote sensing software
Company	Dive Technologies	makers of autonomous underwater vehicles (AUVs) for ocean exploration & surveying; has flexible payload, multi-sensor	https://divetechnologies.				data-/bio-logging drones/AUV's hardware marine/aquatic remote sensing
		drone-making company (\$300-\$7,000), Mavic brand; has buying					drones/AUV's
Company	DJI	guides; make camera drones too licensed versions of the desktop photogrammetry software, Remote			Shenzhen	China	hardware data analysis/viz drones/AUV's remote sensing
Company	Drone Mapper Drone Shark App	Expert (generates Orthomosaics & DEMs) & Rapid app to share realtime information about beach safety collected from drone footage (wildlife spotted in the area, wave conditions, etc.)	http://www. dronesharkapp.com. au/#home		Cedaredge, Colorado	USA	software citizen science drones/AUV's local capacity building marine/aquatic mobile app tracking/telemetry video
Company	Droneseed	developing drone-based reforestation with proprietary seed vessels			Seattle, Washington	USA	drones/AUV's hardware
Company	e-obs GmbH	engineer & produce GPS telemetry products, focusing on lightweight multi-sensor GPS-tags; has bird solar tags, bird battery tags. GPS collars	https://e-obs.de/		Gruenwald	Germany	data-/bio-logging GPS hardware remote sensing terrestrial tracking/telemetry

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Company	EarthSense	uses TerraSentia field phenotyping system on under-canopy robot to monitor agriculture, farming; ML-based analytics; customizable for different sensors; on the edge embedded ML	https://www.earthsense.	Chinmay Soman, Girish Chowdhary	Champaign, Illinois	USA	Al/ML consulting data analysis/viz hardware software terrestrial
Company	Earthshot Labs	support landowners to restore ecosystems through open-source data tools for regenerative l& use (LandOS); ecological ML models & field observation data enable landowners to participate in carbon markets regardless of their size	https://earthshot.eco/	CEO Troy Carter	Champagn, milos	SON	AI/ML data-/bio-logging data management geospatial open-source remote sensing software terrestrial
Company	Econode	makers of SmartTrap, a biosecurity wireless monitoring system using LoRaWAN IoT network (attach to traps, system tells you when they're triggered, user access control); & Satellite gateway for LoRa IoT devices	https://www.econode.nz/	CEO Hoy Carter		New Zealand	hardware loT terrestrial tracking/telemetry
Company	Ecotone telemetry	wildlife tracking hardware company; GPS tags & collars; UHF & GSM remote data download options (make base stations too), tags starting at 5g; waterproof housing	https://www.ecotone- telemetry.com/index. php/en			Poland	data-/bio-logging GPS hardware remote sensing tracking/telemetry
Company	Edge Impulse	embedded Al/machine learning on the edge company; has online no-code platform to upload your data to & run ML models on, which can then be deployed onto devices for on-device detection		Zach Shelby, Jan Jongboom	San Jose California	USA	Al/ML bioacoustics consulting data analysis hardware images software video
Company	Edgetech	underwater tech maker-sonars, bathymetry systems, acoustic	https://www.edgetech.com/	Zadri diletty, dan dongtoom	West Wareham, Massachusetts; Boca Raton, Florida	USA	consulting data-/bio-logging drones/AUV's hardware marine/aquatic mobile app
Company	Envico Technologies	drone manufacturer; does aerial mapping by drone for high resolution, georeferenced photogrammetry; drone mounted thermal sensors with AI to detect animals, pests; developing seed pods for drone-based reforestation	https://www.envicotech.			New Zealand	data analysis/viz drones/AUV's geospatial hardware remote sensing software
Company	eOceans	provides tools to track species, marine protected areas, blue carbon, IIU fishing; observation logger app; projects-eFisheries, eWrecks, eCave, eDisease, eFishKill, eManta, eInvasive,eShark, etc.	https://www.eoceans.co/	Christine Ward		New Zealand	citizen science data-/bio-logging data analysis/viz data management education geospatial images marine/aquatic mobile app software wildlife crime prevention
Company	Esri's Conservation Solutions for Protected Area Management	ArcGIS conservation solutions designed for protected area	https://www.esri.com/en-us/industries/conservation -land-management				camera trap data analysis/viz data management geospatial GPS images mobile app software terrestrial tracking/telemetry
Company	Exodus	camera trap company (\$230-\$415); has 4G cellular options, solar panel plug-ins	https: //exodusoutdoorgear. com/				camera trap hardware images video
Company	explorer.land	map-based platform to demonstrate the impact of forest projects; to connect with donors, investors, etc. by combining exciting storytelling & data on an interactive map	https://explorer. openforests.com/	OpenForests UG	Krefeld	Germany	consulting data management geospatial local capacity building terrestrial

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Company	Eyes on Earth	platform to analyze worldwide land-surface temperature, snow cover, precipitation, soil health, floods, agricultural risk/yield analysis, etc. using satellite observation	https://www.eyesonearth.	Alan Basist. Weather Predict			consulting data-/bio-logging geospatial GPS remote sensing software
Company	FASTCAT Cloud	online AI service that provides automatic species identification, localization & filtering in camera trap images/videos; useful for processing camera trap data to remove empty observations & filter to only species you're interested in	https://service.fastcat- cloud.org/	DynAikon Ltd		UK	AI/ML camera traps citizen science consulting images software video
Company	FaunaLabs	wearables designed for animals, using bio-optical sensors for physiological monitoring; starting use cases with dogs, horses & whales; Fauna Tag, Fauna Collar	https://www.faunalabs.		Durham, North Carolina	USA	data-/bio-logging hardware marine/aquatic terrestrial
Company	Finite Carbon	North America's leading developer & suppler of forest carbon offsets	https://www.finitecarbon.com/		HQ in Wayne, Pennsylvania (offices in Florida & Oregon)		climate
Company	Fishtek Marine	conservation engineering company that maintains a range of tech to reduce bycatch in pelagic longline, gill net, seine & trap fisheries	https://www. fishtekmarine.com/		Devon	UK	consulting hardware marine/aquatic
Company	ForestMind	combines domain expertise with Earth Observation data & isotopic analysis to help food retailers eliminate products that have caused deforestation from food supply chains	https://sa.catapult.org. uk/projects/forestmind/	Catapult Satellite Applications	Oxford, England	UK	climate consulting data analysis/viz remote sensing terrestrial
Company	ForestPesa	peer-to-peer green lending platform for forest restoration using blockchain, GIS of validated Environmental Conservation Credits; web & mobile app; pilot projects with Gorilla Conservation Coffee (Democratic Republic of Congo) & FuelForest Venture (Uganda)	https://forestpesa.com/	Robert Ddamulira	oxiola, Eligidia		funding local capacity building mobile app software terrestrial
		develops customizable, accessible, affordable Arduino-compatible hardware for environmental, conservation & wildlife monitoring; specialize in imaging & video technology & wireless sensor	https://conservation.	Chris 'Akiba' Wang, Jacinta		Japan	Al/ML camera trap consulting data-/bio-logging data analysis/viz education hardware loT remote sensing software
Company	FreakLabs Frontier Labs	networks makes BAR-LT bioaccustic audio recorders (solar-powered option too); \$1100 but can also rent for less (short or long-term); uses 18650 batteries, has built in GPS; has scheduler software for programming devices	https://frontierlabs.com.	Plucinski Michael Maggs, Mark Calder	Brichane Queensland	Australia Australia	terrestrial bioacoustics GPS hardware software
Company	Gaia Resources	environmental technology consultancy focusing on responsible, sustainable tech solutions; develop & contribute to open-source software, use open data; products include NAFI Fire Info App & QGIS blugin, forest canopy change detection software, data management platforms	https://www. gaiaresources.com.au/	mana magga, man caluel	Perth (HQ), Brisbane, Darwin	Australia	consulting data analysis/viz data management marine/aquatic mobile app remote sensing software terrestrial
Company	Galago	I& monitoring software using aerial & satellite imagery to inventory sites; uses Al to analyze health, growth & distribution of vegetation to spot signs of erosion, contamination, invasive species, etc.	https://www.galago.ai/		Denver, Colorado	USA	Al/ML data analysis/viz geospatial remote sensing software terrestrial
Company	GeoNadir	central repository for storing, sharing, managing & accessing drone data following FAIR principles; education materials for capturing & analyzing drone mapping data; free orthomosaics	https://geonadir.com/	Karen Joyce, Paul Mead		Australia	data analysis/viz data management drones/AUV's education images software

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Company	GeoTrak Inc	makers of satellite telemetry PTT devices (platform transmitter terminal), solar-powered with GPS (use Argos); 5g & up; mostly bird-borne tags	https://www.geotrakinc.		Apex, North Carolina	USA	data-/bio-logging GPS hardware terrestrial tracking/telemetry
0	Global Conservation	strategy consultancy firm specializing in corporate responsibility; provide professional, solutions-focused services that assist NGOs, government agencies, & private sector to deliver biodiversity	https://www. globalconservationsolutio				
Company	Solutions GPS Collars	outcomes more efficiently & effectively FliteTrax (avian), EarTrax (ear tag); CellTrax (collars, tags); IoT, GSM data download, collect environmental data too; also has software - data converter, configuration app; upload tools	https://www.gps-collars.com/	Josh Noseworthy	Donna	Norway	consulting data-/bio-logging data management geospatial GPS hardware loT software terrestrial tracking/telemetry
Company	Haikubox	Haikubox & HaikuMarine are listening devices that individuals or organizations can use to identify birds & marine mammal sounds that are recorded on the devices	https://haikubox.com/	David Mann, Cornell Lab of Omithology	Ithaca, New York, USA	USA	bioacoustics hardware marine/aquatic software terrestrial
		environmental consultancy focused on advancing sustainable development globally; works with for-profit, private-sector, & government org's & non-profits to provide cost-effective,	https://www.		HQ in Canada + other	Canada Botswana	
Company	Hatfield	sustainable solutions to clients' environmental & social needs maker of VHF transmitters; tags as small as 0.3g; different attachment mechanisms - glue, tailmount, implant, backpack,	hatfieldgroup.com/		offices	Indonesia	consulting data-/bio-logging funding hardware remote sensing
Company	Holohil	collar, harness; have grants program hook-shielding tool for pelagic longline fishing that stops seabird bycatch, is safer for crew, has no negative impact on target catch	https://www.holohil.com/	Fred Anderka	Ontario	Canada	tracking/telemetry hardware
Company	Hookpod	rates	com/en/		Devon	UK	marine/aquatic
Company	lcoteq	technology innovation consultancy specializing in designing wireless technology & IoT systems, & accompanying software; collaborators on Arribada's plastic tracking & turtle tracking projects, helped develop devices & process signals/data	https://www.icoteq. com/applications/	Craig Rackstraw & Liam Wickins	Bath, Wells	UK	consulting data-/bio-logging data analysis/viz GPS hardware IoT marine/aquatic software terrestrial
		designs tech & end-to-end solutions for fish tracking, fish farming/aquaculture intelligence, open ocean & land-based	https://www.innovasea.		Bainbridge Island, Washington Baton Rouge, Louisiana Belfast, Maine Boston, Massachusetts Seattle, Washington Bergen Halifax	USA Norway Canada	data analysis/viz hardware marine/aquatic software
Company	Internet of Elephants	aquaculture develop video games to promote conservation awareness, education (makers of Wildeverse, Safari Central, Run wild, Unseen Empire)	https://www.internetofelephants.com/	Gautam Shah	Puerto Varas	Chile Mauritius Kenya	tracking/telemetry education images marine/aquatic networking software terrestrial video
Company	Iridium	delivers reliable, global (only system), weather-resilient, two-way, real-time satellite connectivity to monitor endangered species, wildlife migration patterns, etc.; location-based services, surveillance/alerting, field communications	https://www.iridium_com/markets/wildlife/	Saddin Graff	McLean, Virginia (HQ); Tempe, Arizona; Chandler, Arizona; Leesburg, Virginia		data-/bio-logging geospatial GPS hardware marine/aquatic remote sensing terrestrial tracking/telemetry
Company	JaiaBots	micro-sized hybrid autonomous surface & subsurface vehicles, designed for shore, manned or unmanned vessel launched operations; software open-source; can include different sensors	https://www.jaia. tech/jaiabot	lan Estephan Owen & Jason Webster	Newport, Rhode Island	USA	data-/bio-logging drones/AUV's hardware marine/aquatic remote sensing

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Company	Kiwi Track Ltd	manufactures biotelemetry transmitters, receivers, antennas; focus on New Zeal& species	https://kiwitrack.weebly.com/	Daryl Olsen	Havelock North	New Zealand	data-/bio-logging hardware remote sensing tracking/telemetry
Company	Landscape: Land Conservation Software	comprehensive software solution for land conservation; mobile app for monitoring data collection passes info to flexible web app for acquisition and stewardship project management	https: //landconservationsoftwar e.com/	Caleb Pourchot	Madison, Wisconsin	United States	data management geospatial GPS mobile app remote sensing software
Company	Little Leonardo	maker of dataloggers for marine animals; loggers/tags can include environmental & physiological (heart rate, acceleration) sensors; also has videologger, time-scheduled release system	http://l-leo.com/eng/		Tokyo	Japan	data-/bio-logging hardware marine/aquatic tracking/telemetry video
0	Laborari iff	helping fishers & right whales coexist; a lineless, self-surfacing, modular lobster trap retrieval system (to reduce whale	https://www.lobsterlift.	Cormac Hondros-McCarthy,	Lawell Massachusetts	LICA	consulting hardware marine/aquatic
Company	LobsterLift	designs & manufactures fish & wildlife monitoring systems (radio, acoustic, satellite-GPS, Iridium, Argos, Global Star; dataloggers);	com/	Ted Zhu	Wareham Seattle, Washington St John's & Newmarket	UK USA Canada	remote sensing bioacoustics data-/bio-logging geospatial GPS hardware marine/aquatic remote sensing terrestrial
Company	Lotek	has acoustic open protocol with European Tracking Network pioneering World Integration Loop, foundational platform for planethealing entertainment; platform integrates environmental data with	http://www.lotek.com/ http://machinesanddreamland		Havelock North	New Zealand	tracking/telemetry Al/ML climate citizen science data management
Company	Machines & Dreamland	video games in the cloud offer GIS services for pest/invasive species management, funding management, database organization, long-term management	.com/	Ryan Boudinot	Seattle, Washington	USA	software consulting data management geospatial GPS
Company	Map the Point	planning hosts Community Maps, platform for participatory mapping; can create your own or join existing communities; has options for	https://mapthepoint.com/ https://mappingforchange.org.	Sarah Godfrey Louise Francis, Muki			software citizen science education geospatial open-source networking
Company	Mapping for Change	private & non-profit org's makers of wireless sensors, implantable & attached tags; Fauna tag (radio, GSM or GPS transmitters, radio collars); personalized software generates visualizations & analytics; have MyFlight	https://microsensory.	Haklay, Chris Church	London	UK	software data-/bio-logging data analysis/viz GPS hardware mobile app software terrestrial
Company	Microsensory Microsoft AI for Earth	leverages cloud & Al tools to help solve global environmental; advance how we monitor, model & manage Earth's natural systems; projects include Megadetector, SEEKER app, Planetary Computer, code for classification of species in photos, satellite & aerial imagery, spectrograms (audio); develops API's for these	com/en/index.html https://www.microsoft.com/en-us/ai/ai-for-earth	Córdoba, London Microsoft	Spain, UK		tracking/telemetry Al/ML camera trap data analysis/viz data management geospatial open-source software remote sensing
Company	Microwave telemetry	bird & fish tracking; satellite PTTs; Argos & GSM; ground track transmitter recovery option; Pop-Up/PSAT for fish tags	https://www. microwavetelemetry.com/		Columbia, Maryland	USA	data-/bio-logging geospatial GPS hardware marine/aquatic terrestrial tracking/telemetry
Company	Migrate Technology	specialize in design & manufacture of miniature archival light level loggers (geolocators/geologgers), Intigeo brand; weight as low as 0.3g	http://www.migratetech.		Cambridge	UK	data-/bio-logging hardware remote sensing tracking/telemetry

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		wildlife telemetry hardware company; makes GSM & radio tags, nano-GPS telemetry tags - 3.5g; direct radio download to base station or via GSM; solar-paneled tags, accelerometers, TDR					data-/bio-logging GPS hardware remote sensing
Company	Milsar	sensors	https://milsar.com/			Romania	tracking/telemetry data-/bio-logging GPS
Company	Miromico	telemetry hardware maker; make miro Nomad (GPS tracker with solar power supply); Nomad Light (ultra lightweight 4g); used for tracking birds; LoRaWAN enabled	https://miromico. ch/products/?lang=en		Zurich	Switzerland	hardware terrestrial tracking/telemetry
Company	MOTUS	wildlife tracking system; international collaborative research network that uses coordinated automated radio telemetry to facilitate research & education on the ecology & conservation of migratory animals	https://motus.org/	Birds Canada			data management GPS remote sensing terrestrial tracking/telemetry
Company	Moultrie	camera-trap company; prices \$45-\$55 (refurbished), \$70-\$120 (new); have great close-out sales & cheap but high-quality refurbished options	https://www. moultriefeeders. com/products/cameras				camera trap hardware images video
	Mindely				Indian Toyon	LICA	camera trap hardware images
Company	Muddy	has app & web interface to program cameras, process images; specialize in making bespoke, user-focused data collection apps & websites for environmental & socially focused projects; projects include Mammal Mapper, Coreo, Whale Track, MoorAPPS, Barrier	https://www.natural-	5 100	Irving, Texas	USA	video citizen science consulting mobile app
Company	Natural Apptitude	build open-source software solutions for protected areas (GeoNature data collection & analysis app & web portal), citizen science/ecotourism (Ecobalade app), urban forestry (ecoTeka platform for tree management) & species conservation (Track	apptitude.co.uk/	Dave Kilbey		UK	software citizen science consulting data-/bio-logging data analysis/viz data management mobile app open-source remote sensing
Company	Natural Solutions NCX	software for management of captive breeding) forest carbon market facilitator- Basemap platform as scientific foundation of carbon exchange; connects corporations to landowners, habitats & communities they impact through carbon marketplace; enable carbon credit purchases, help landowners monetize their forests	solutions.world/ https://ncx.com/	Olivier Rovellotti	Marseille (HQ) San Francisco, California	France	software climate consulting data analysis/viz software
Company	NCA	wildlife tracking hardware company - has GPS, GSM, PTT, Globalstar/Iridium units for terrestrial & avian species; collars, backpacks ear tags, etc.; 1-way & 2-way connectivity available;	http://www.northstarst.		San Francisco, Camornia	USA	geospatial data-/bio-logging geospatial GPS
Company	North Star Tracking	datalogger collars available too global underwater acoustics consultancy, provide scientifically robust underwater noise effects assessments, data analysis services, passive acoustic monitoring, underwater propagation	https://www.ocean- acoustics.com/about- acoustical-consulting-		Oakton, Virginia	USA	hardware bioacoustics consulting data analysis/viz marine/aquatic
Company	Ocean Acoustics Ltd	modelling, etc.	experts/		Auckland	New Zealand	software
Company	Ocean Instruments	electronic and software design for subsea acoustic monitoring systems; make the SoundTrap hydrophone (\$3,100-\$5,100) & dbWav acoustic analysis software (\$990);	http://www. oceaninstruments.co.nz/	John Atkins	Auckland	New Zealand	bioacoustics data analysis/viz hardware marine/aquatic
Company	Ocean Science Analytics			Liz Ferguson	San Diego, California	USA	bioacoustics consulting data analysis/viz education events geospatial marine/aquatic remote sensing software
Company	OpenForests	offer consulting for remote sensing for forests, source aerial imagery, explorer.land (map-based platform to demonstrate impact of a forest project), forest monitoring dashboard to detect deforestation & fire	https://openforests.com/	Stefan Haas & Dr. Patrick Ribeiro	Krefeld	Germany	climate consulting data analysis/viz data management geospatial GPS remote sensing software

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		partner of The Things Network; provide field sensors & environmental data logging tech to generate data that is turned into tailored dashboard; uses IoT, cloud computing, open-source					AI/ML consulting data-/bio-logging data analysis/viz data management hardware IoT open-source software
Company	Opensensing	software	https://opensensing.com/		Brighton	Australia	terrestrial
	Ornitela	telemetry hardware maker specializing in wild birds; OrniTrack brands (GPS + sensor tags) with GSM or cell service wireless data transfer; solar-paneled tags (\$880-\$1300);	https://www.ornitela.com/		Vilnius	Lithuania	data-/bio-logging GPS hardware terrestrial
Company	Overstory	using satellite imagery & Al to analyze vegetation on Earth to prevent wildfires	https://www.overstory.com/	Indra den Bakker, Anniek Schouten, Roelof Pieters	Amsterdam, Sommerville, Massachusetts	The Netherlands, USA	tracking/telemetry Al/ML climate consulting data management geospatial remote sensing software terrestrial
Company	Oxford Nanopore Technologies	developed sensing tech that uses nanopores embedded in high- tech electronics to perform precise molecular analyses with DNA, RNA; real-time genetic analyses, portable devices	https://nanoporetech.com/		Oxford (HQ), Cambridge, Harwell, New York, Cambridge, San Francisco, Shanghai, Tokyo	UK (HQ), USA, China, Tokyo, Singapore	data-/bio-logging data analysis/viz eDNA/genetics hardware marine/aquatic terrestrial
Company	Pachama	uses machine learning with satellite imaging to measure carbon captured in forests; used for remote verification & monitoring, new standard of assurance in impact of these investments; on online platform you can review & support forest efforts around the world; integrated with REDD+	https://pachama.com/	Diego Saez Gil, Tomas Aftalion			AI/ML climate consulting geospatial remote sensing software terrestrial
					Dunaldun Navi Vanla 9		consulting
Company	PalmOil.io	for businesses to identify deforestation in their supply chain & track environmental risks from their suppliers	https://palmoil.io		Brooklyn, New York & Arlington, Virginia	USA	software wildlife crime prevention
Company	Pano Al	makers of Pano Rapid Detect, Al platform for fire professionals to quickly detect threats, confirm fires & disseminate information to responders	https://www.pano.ai/	Sonia Kastner	San Francisco, California	United States	Al/ML climate consulting data management software terrestrial
Company	PIX4D	photogrammetry software suite for mobile & drone mapping; has flight app, desktop & cloud platforms; has Capture mobile app to plan, fly & get optimized images, Catch app to turn mobile devices into 3D scanners, Scan flight app for inspection of data	https://www.pix4d.com/		Prilly, Switzerland (HQ), also Berlin, Madrid, San Francisco & Denver (USA), Shanqhai & Tokyo		data management drones/AUV's geospatial mobile app remote sensing software
Company	Planet Labs	leading provider of global daily Earth data; has highest-frequency satellite data commercially available; 200+ satellites; has analytics & monitoring dashboard; works with non-profit & private users	https://www.planet.com/	Will Marshall & Robbie Schingler	San Francisco, California Washington DC Berlin	USA Germany	data analysis/viz data management drones/AUV's geospatial networking open-source remote sensing
Company	RAKwireless	develops market-oriented & easy-to-use IoT building blocks of MCUs, communication modules & sensors in a modular IoT platform system (uses LoRa, WisBlock, LTE, etc.)	https://www.rakwireless.com/en-us		Shenzhen, Beijing, Xi'an	China	hardware IoT
Company	Raspberry Pi				Cambridge	UK	AI/ML education events hardware
Company	Reconyx	camera-trap company; prices \$400-\$700; can set custom focal distance; external power connection options, solar panels; has MapView image processing & management software, mobile app	https://www.reconyx.		Wisconsin	USA	camera trap hardware images video

Remark Serving Research A motive Extragate A motive Extragate A motive Company Research Systems Research Serving Research A motive Extragate A motive Ex	Resource Type	Resource Name	Description of Resource	Link to Resource	Developer / Creator / Lead	City / State	Country	Tags / Keywords
And	Company		measurement sensor, designed for close range); center uses remote sensing data, fieldwork, & spatial models to measure, map & monitor biophysical properties in terrestrial, atmospheric &		Roelfsema (University of	Quanciand	Australia	data-/bio-logging data analysis/viz hardware marine/aquatic remote sensing
Designanty Remoster Systems Approise additionation of the processing of the company (4400); collular, entering processing of the collular processing of th	Jompany	Centre	aquatic environments	<u>au/cbi</u>	Queensiand)	Queensiand	Australia	
Company Reigiele Service from the description of the service of th	Company	Renoster Systems	savannah, & as well as provide data analytic tools to optimize		Saif Bhatti	Austin, TX	USA	bioacoustics consulting data analysis/viz GPS hardware remote sensing
Company Ridgetec solar praces. Comment Part of the property of								camera trap
Company SafetyNet Technologies to help filters action to pright fish to the filters action to pright filters action to prigh	Company	Ridgetec	solar panels; Camera Portal web app for live image viewing					images video
Company SafetyNet Technologies to help fashers catch the right fiels with thiss series and the right field series and the results of the r								marine/aquatic
leader in ocean-going autonomous surface vehicles; Al enabled, secure data portal; for maritime domain awareness, ocean mapping, ocean data, wind a Saler power for human-pict controlled remotely; can be deployed for up to 12 montes and controlled remotely and controlled r	Company	SafetyNet Technologies			Aran, Nadia, Dan	London	UK	·
develops solutions to climate change & biodiversity loss; guides investments in natural climate solutions by leveraging satellite data, exceptional exceptions and exceptional data and geospatial exceptions of a string and intelligence epihant collars, neck collars (GPS, GSM, Indium, WFF, accelerometers), bird backpacks, girdfel tags; can give emotality ISM, selection and geospatial geospatiala			secure data portal; for maritime domain awareness, ocean mapping, ocean data; wind & solar powered; human-pilot controlled					data analysis/viz data management drones/AUV's marine/aquatic
Company Salo develops solutions to climate change & biodiversity loss; guides investments in natural climate solutions by leveraging satellite data, ecological modeling & artificial intelligence consulting data analysis & processing of the product of the produc	Company	Saildrone	remotely; can be deployed for up to 12 months	com/	Richard Jenkins	Alameda, California	USA	hardware
company Savannah Tracking Ltd (light/sounds alarms) Company ScoutGuard Australia that follow Australian telecommunications regulations Company ScoutGuard Australia that follow Australian the follow Australian telecommunications regulations Company Scubotics camera trap retailer; makes their own trail cams too, cellular options that follow Australian telecommunications regulations Company Scubotics camera trap retailer; makes their own trail cams too, cellular options that follow Australian telecommunications regulations Intitip://www.sauhotics. Company Scubotics classification), citizen science, ALV's (w/ video recorders) Company Sea-Bird Scientific logses, water samplers, AUV/ROV sensors Company Sea-Bird Scientific logses, water samplers, AUV/ROV sensors Company Semetch Selecture of products for measuring cocan parameters (salinity, temperature, etc) & environmental water quality monitoring; includes mooring systems, sensors, data-nobility selecture of products for measuring cocan parameters (salinity, temperature, etc) & environmental water quality monitoring; includes mooring systems, sensors, data-nobility selecture of products for measuring cocan parameters (salinity, temperature, etc) & environmental water quality monitoring; includes mooring systems, sensors, data-nobility selecture of products for measuring cocan parameters (salinity, temperature, etc) & environmental water quality monitoring; includes mooring systems, sensors, data-nobility selecture of products for measuring cocan parameters (salinity, temperature, etc) & environmental water quality monitoring; includes mooring systems, sensors, data-nobility selecture of products for measuring cocan parameters (salinity, temperature, etc) & environmental water quality monitoring; includes mooring systems, sensors, data-nobility selecture of products for measuring cocan parameters (salinity, temperature, etc) & environmental water quality monitoring; includes mooring systems, sensors, data-nobility selecture of products for measuring cocan pa	Company	Salo	investments in natural climate solutions by leveraging satellite data, ecological modeling & artificial intelligence	https://salo.ai/		San Francisco, California	USA	
Company ScoutGuard Australia that follow Australia that follows Allow Australia that follows Allow All	Company	Savannah Tracking I td	collars (GPS, GSM, Iridium, VHF, accelerometers), bird backpacks, giraffe tags; can give mortality SMS alerts; an set up user-defined geofences (& relevant alerts) - LionShield geofence project		Hanrik Parnar Pasmusson		Konya	data-/bio-logging GPS tracking/telemetry
Company ScoulGuard Australia that follow Australian telecommunications regulations http://scoulguard.com.au/ Company Scubotics Scub	Сопрапу	Savaillali Hacking Liu			Hellik Dalilei Kasiliusseli		Keriya	camera trap hardware
Company Scubotics aim to reduce cost/time to monitor coral reefs using AI (coral classification), citizen science, AUVs (w/ video recorders) Company Sea-Bird Scientific world's largest developer/manufacturer of products for measuring ocean parameters (salinity, temperature, etc) & environmental water quality monitoring; includes mooring systems, sensors, dataloggers, water samplers, AUV/ROV sensors Company Sea-Bird Scientific high-performance analog & mixed signal semiconductors & advanced algorithms; specializing now in IoT, data centers & nobility Company Semtech Sensing Clues Sensing Clues Sensing Clues Sensing Clues AIML drones/AIML drone	Company	ScoutGuard Australia			ScoutGuard Australia		Australia	
world's largest developer/manufacturer of products for measuring ocean parameters (salinity, temperature, etc) & environmental water quality monitoring; includes mooring systems, sensors, dataloggers, water samplers, AUV/ROV sensors Company Sea-Bird Scientific Sea-Bird Scientifi	oopa,		aim to reduce cost/time to monitor coral reefs using AI (coral	https://www.scubotics.				Al/ML drones/AUV's hardware marine/aquatic tracking/telemetry
Company Sea-Bird Scientific Sea-Bird S	Company	Scubotics	classification), citizen science, AUVs (w/ video recorders)	com/		Melbourne, Florida	USA	
England, France, Germany, Switzerland, https://www.semtech. Company Semtech maker of high-performance analog & mixed signal semiconductors & advanced algorithms; specializing now in IoT, data centers & mobility mobility data mgmt platform for nature conservation; suite of tools includes Cluey-data collector & tracking app, Focus-data explorer, Wildcatwildlife conservation analytical toolbox; Wildlife data hub-data analysis & processing Sensing Clues England, France, Germany, Switzerland, https://www.semtech. com/ Som/ Sensing Clues Al/ML hardware data man data man data man data anal software Al/ML hardware data man data man data anal software The Netherlands The Netherlands consulting consulting	Company	Sea-Bird Scientific	ocean parameters (salinity, temperature, etc) & environmental water quality monitoring; includes mooring systems, sensors, data-	https://www.seabird.com/				climate consulting data-/bio-logging hardware marine/aquatic remote sensing tracking/telemetry
data mgmt platform for nature conservation; suite of tools includes Cluey-data collector & tracking app, Focus-data explorer, Wildcat- wildlife conservation analytical toolbox; Wildlife data hub-data analysis & processing https://sensingclues.org/ Jan-Kees Schakel			& advanced algorithms; specializing now in IoT, data centers &	https://www.semtech.			England, France, Germany, Switzerland, China, India, Japan,	hardware IoT
Company Sensing Clues analysis & processing https://sensingclues.org/ Jan-Kees Schakel Amsterdam The Netherlands mobile approximation of the Netherlands of the Nethe	Company	Semtech	data mgmt platform for nature conservation; suite of tools includes Cluey-data collector & tracking app, Focus-data explorer, Wildcat-	com/			Korea, Malaysia, Taiwan	data management data analysis/viz
consultin	Company	Sensing Clues		https://sensingclues.org/	Jan-Kees Schakel	Amsterdam	The Netherlands	mobile app
hardware makers of dataloggers, networked monitoring systems, RFID tags, burrowscopes, ozone analyzer; consult on marine ecological risk terrestrial			makers of dataloggers, networked monitoring systems, RFID tags, burrowscopes, ozone analyzer; consult on marine ecological risk					consulting data-/bio-logging hardware marine/aquatic terrestrial tracking/telemetry

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Company	Samar	comerc from company (\$950,\$900), but ITF callular areas	https://www.snyperhuntingproducts.		Maminovilla Tarassas	LICA	camera trap hardware images
Company	Snyper	camera trap company (\$250-\$390); has LTE cellular cams devices, data & apps to enable ocean intelligence at scale; Smart Buoy systems, weather API powered by largest open ocean sensor	com/		Mcminnville, Tennessee	USA	video consulting data-/bio-logging data analysis/viz hardware IoT
Company	Sofar Ocean	network, ship route optimization tool; ocean IoT system-distributed sensor platform with integrated solar power, satellite data connectivity & modular sensors	https://www.sofarocean.	Tim Janssen, Evan Shapiro	San Francisco, California	USA	marine/aquatic remote sensing software
Company	Sound Motrice	designs & manufactures imaging sonars (DIDSON, ARIS makers)	http://www.soundmetrics.		Pollovia Washington	USA	data-/bio-logging drones/AUV's geospatial hardware remote sensing
Company	Sound Metrics	that can be deployed from vessels, ROVs, AUVs & divers	com/		Bellevue, Washington	USA	tracking/telemetry education events
Company	Spark Fun	electronic hardware maker; open source components, resource & tutorials; build, test & assemble >400 kits & boards in house; has non-profit arm - Community Partnership Program	https://www.sparkfun.	Nathan Seidle	Niwot, Colorado	USA	funding hardware local capacity building networking
		camera trap company (\$140-\$480); has cellular cams, external	https://spartancamera.				camera trap hardware images
Company	Spartan	battery/solar panel kits; Camera Management mobile & web app camera trap company (\$100-\$300); have certified pre- owned/refurbished deals; has cellular cams, solar panel/external	com/		Duluth, Georgia	USA	video camera trap hardware
Company	Spypoint	battery kits; app to manage cameras & photos, view customizable maps, check weather conditions	https://www.spypoint. com/en		Quebec	Canada	images video
C	Star-Oddi	makers of biologging tags (implantable tags too), environmental	https://www.star-oddi.		Gardabaer	Iceland	data-/bio-logging hardware marine/aquatic terrestrial
Company		sensing loggers (underwater & terrestrial), accelerometers camera trap company (\$60-\$300); cellular cams; Comm& Pro app	https://www.stealthcam.				tracking/telemetry camera trap hardware images
Company	StealthCam	- downloads, image filtering, tagging options online portal providing proactive ecosystem monitoring, user-defined alerts, near real time analytics & imagery, Esri compliant;	https://swiftgeospatial.		Irving, Texas	USA	video climate consulting data analysis/viz data management geospatial GPS remote sensing
Company	Swift Geospatial Solutions	cloud-based processing; also forestry applications	solutions/conservation/		Pretoria	South Africa	software camera trap hardware
Company	Tactacam	camera trap company (\$140-\$200); WiFi & cellular options; mobile app to remotely control camera	https://www.tactacam. com/		Caledonia, Minnesota	USA	images video
Company	Tator	open-source web platform for analyzing large video & image data collections; lets you rapidly deploy custom analytics workflows to gain insights from raw imagery; data management tools, annotation tools;	https://www.tator.io/	CVision AI, Inc.			camera traps data analysis/viz data management images open-source software video
	Technosmart Europe	manufacture GPS tracking systems for animals (avian, terrestrial & aquatic options); also have accelerometers, TDR sensors, Valve-Trak for bivalves (motion), remote download with UHF & GSM options; make base stations too; tags 1.5g up to 100g	https://www.technosmart.eu/		Rome	Italy	data-/bio-logging geospatial GPS hardware marine/aquatic remote sensing terrestrial tracking/telemetry

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Company	Teledyne FLIR	hardware company making devices for thermal imaging, visible- light imaging, video analytics, measurement & diagnostic, & threat detection systems & machine vision cameras	https://www.flir.com/		dozens of locations worldwide		Al/ML camera trap data analysis/viz hardware images remote sensing video
Company	Telemetry Solutions	GPS telemetry hardware for wildlife; smallest is 5g; backpacks, collars & implants	https://www. telemetrysolutions.com/	Quintin Kermeen	Concord. California	USA	data-/bio-logging geospatial GPS hardware remote sensing terrestrial tracking/telemetry
Company	Telenax	wildlife tracking hardware company; VHF, GPS, Iridium options, drop-off mechanisms; sensors for mortality, activity/hibernation, posture, environmental, accelerometer, geofence,	https://telenax.com/	Quinuii Reimeen	El Marques	Mexico	data-/bio-logging GPS hardware remote sensing tracking/telemetry
Company	Telonics	wildlife tracking hardware company; uses VHF, GPS, Argos; has options for avian, marine & terrestrial species; programmable collar releases; trapsite & marker beacon transmitters; have species-specific options for anteater, manatee, reptiles, crocodiles, elephants	https://www.telonics.com/index.php		Mesa, Arizona	USA	data-/bio-logging data management GPS hardware marine/aquatic remote sensing terrestrial tracking/telemetry
Company	Terraformation	forest tech/forest accelerator; rapid reforesting; provide tools, training, financing & business support to scale forest restoration projects around the globe	https://www. terraformation.com/	Yishan Wong	Mosa, Alizona	33,1	consulting education events
Company	terraPulse	platform to map & monitor large landscapes through satellite-based measurements of forest-, crop-, range- & wildl& productivity partner with businesses to enhance corporate stewardship &	https://www.terrapulse.com/about/index.html#what-we-do-about	Saurabh Channon, Joseph Sexton, Ph.D., Min Feng, Ph.D.	North Potomac, Maryland	USA	Al/ML consulting data analysis/viz geospatial remote sensing software terrestrial
Company	The Biodiversity Consultancy	sustainability; creating science-based targets, developing 2030 strategies, biodiversity footprinting across value chains, risk-based ecological impact assessment, offsets, etc.	https://www. thebiodiversityconsultancy.com/		Cambridge	UK	consulting data analysis/viz
Company	The Earth Genome	environmental data analytics organization translating big environmental data to transform decision making	https://www.earthgenome.org/		California	USA	consulting data analysis/viz eDNA/genetics
Company	Thingy IoT	innovator for IoT devices, low-power & low-cost connectivity; design, development & production of environmental real-time data acquisition & telemetry systems designed to run unattended for long periods in remote locations	https://thingy.us/		Bellevue, Washington	USA	data management hardware loT tracking/telemetry
Company	Tigrinus	hardware company that makes trail cams, UHF & GPS transmitters/receivers, GSM integration; acoustic recorders	https://www.tigrinus.com.		Santa Catarina	Brazil	bioacoustics data-/bio-logging geospatial GPS hardware remote sensing terrestrial tracking/telemetry
Company	Titley Scientific	wildlife tracking hardware company; collar, backpack, glue on & screw in GPS tracking devices; 0.35g VHF bat trackers	https://www.titley-scientific.com/us/products/wildlife-tracking		Brendale Lancashire Johannesburg Columbia, Missouri	Australia UK South Africa USA	data-/bio-logging GPS hardware remote sensing tracking/telemetry
Company	Trailcam Pro	retailer for camera traps (from diff companies); has reviews, product spec's & tests	https://www.trailcampro.	Rich Howell	Springfield, Missouri	USA	camera trap hardware images education video
Company	TRAILMASTER	not active anymore? camera trap company (\$210-\$700); active & passive IR cams	https://www.trailmaster.		Lenexa, Kansas	USA	camera trap hardware images video

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Company	Treeconomy	platform to package & sell carbon offsets on behalf of landownders undertaking reforestation; provides sustainable income stream for landowners & meets growing dem& for carbon offsets	https://www.treeconomy.	Harry Grocott, Robert Godfrey	London	England	AI/ML climate consulting local capacity building remote sensing terrestrial
Company	Treeo	voluntary CO2 market app to mobilize small-scale farmers to help reverse climate change by monitoring tree-planting initiatives	https://treeo.org/	Johanne Schwegler	Stuttgart	Germany	climate education images local capacity building mobile app terrestrial
Company	Treevia Forest Technologies	track & increase forest productivity through forestry research, investment; integration with IoT; "turn data into forest intelligence"	https://treevia.com.br/		São Paolo	Brazil	consulting data analysis/viz geospatial IoT remote sensing software
0	HAMANIED			Dath Dridge	Drintel	United Kinadasa	AI/ML camera trap drones/AUV's geospatial images
Company	Upstream Tech	low-cost wildlife drone services & imagery production smart climate solutions for a changing planet; Lens platform to monitor landscapes with aggregated satellite, aerial, environmental data, & collaborative workflow	https://upstream.tech/	Marshall Moutenot, Alden Keefe Sampson	Bristol	United Kingdom	video climate data-/bio-logging education geospatial networking remote sensing software
Company	Urban Sky	remote sensing via the stratospheric Microballoon (microsatellite); delivering broad area, high-resolution aerial imagery at a coast drastically less than satellites, aircraft or drones; maintain archive of regularly imaged urban areas; 10cm GSD 3-b& aerial imagery; \$5/sq km	https://urbansky.com/	Andrew Antonio, Jared Leidich	Denver, Colorado	USA	climate consulting data-/bio-logging geospatial hardware images remote sensing
Company	Vectronic Aerospace	makers of GPS collars (Vertex, Survey brands), drop-offs, external sensors (proximity tags, heart rate logger, accelerometer, mortality implants), trap transmitters	https://www.vectronic-aerospace.com/		Berlin	Germany	data-/bio-logging GPS hardware remote sensing tracking/telemetry
Company	View into the Blue	connects clients with tech to provide environmental monitoring & data services; specializes in real-time, self-cleaning underwater camera & sensor systems; can do live-streaming, differing lighting systems; environmental & audio sensor integration; devices use Al on the edge	https://www. viewintotheblue.com/	Trevor Mendelow	Boulder, Colorado	USA	AI/ML bioacoustics camera trap data-/bio-logging drones/AUV's hardware marine/aquatic tracking/telemetry
Company	Vizzuality	data visualization org; works on Global Forest Watch, Resource Watch, Trase, Marxan, Restor, Global Mangrove Watch, Wildlife Insights, Half Earth (from EO Wilson foundation), supply chain transparency	https://www.vizzuality.		Madrid Cambridge Porto	Spain UK Portugal	data analysis/viz data management consulting
Company	Wild Immersion	a virtual reserve; can meet wild animals in their 'natural habitat' with VR films; explore biodiversity with educational games within app; currently has 140 species & 40 countries	https://en.wildimmersion.			France(?)	education mobile app video
Company	Wildgame Innovations	camera trap company (\$50-\$140); Huntsmart mobile app for remotely controlling cameras; have cellular cams	https://www. wildgameinnovations. com/		Irving, Texas	USA	camera trap hardware images video
Company	Wildlife Acoustics	maker of SongMeters (passive acoustics), Echo (bats); SongMeters (\$850), mini (\$500), & micro (\$250); Kaleidoscope software (free spectrogram viewer, Pro version \$400/year for bioacoustic analysis); have grants program, lots of webinars, resource archive, community forums	https://www. wildlifeacoustics.com/	lan Agranat	Maynard, Massachusetts	USA	bioacoustics data analysis/viz education funding hardware software terrestrial

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		wildlife telemetry solutions company; makers of the Fastloc GPS;	https://wildlife.computers		Dadmand Washington	LIGA	data-/bio-logging data management GPS hardware
Company	Wildlife Computers	avian, PAT, SPOT, SPLASH, TDR & custom tags; have a tag mgmt portal	https://wildlifecomputers.		Redmond, Washington Havelock North	USA New Zealand	remote sensing tracking/telemetry
Company	Wildlife Drones	implementing drone tracking solutions - radio tracking, thermal imaging, drone supply, pilot training & licensing; can track up to 40 radio-tagged animals simultaneously	https://wildlifedrones.net/	Dabbie Saunders	Acton	Australia	drones/AUV's education events geospatial hardware images tracking/telemetry
Company	Wilding Diones	manufacture VHF telemetry antennas, receivers & accessories; transmitters for reptiles, fish, small & large mammals, birds,	https://wildlifematerials.	Debbie Gaunders	Acton	Australia	data-/bio-logging hardware
Company	Wildlife Materials, Inc	implantable tags	com/	Robert & Linda Hawkins	Murphysboro, Illinois	USA	tracking/telemetry
Company	WildlifeTek	provide online courses & workshops, consulting & support services, free resources & community; offer specialist thermal imaging services predominantly suitable for bat surveys		Kayleigh Fawcett Williams	wurprysboro, illinois	00A	camera trap consulting education events hardware images terrestrial
Company	Xerius Tracking	wildlife monitoring & tracking systems; develops miniturized trackers & data loggers using GPS, Argos, VHF, UHF & GSM technologies; software to connect/manage devices remotely	http://www. xeriustracking.fr/	, 10	Saint Jean	France	data-/bio-logging GPS hardware remote sensing software tracking/telemetry
	Al for Climate Lightning	Lightning talks by experts about using AI to accelerate humanity's	https://www.forclimate.				AI/ML events
Opportunity	Talks	response to climate change	ai/lts				education
Opportunity	Al for the Planet	annual conference & monthly virtual talk series on AI use in environmental sustainability, climate change mitigation, pollution management, air/water quality, & SDGs	https://aifortheplanet.	UNESCO, UNEP, Microsoft Al for Earth, startupinside			AI/ML education events networking
Opportunity	ARSET	Applied Remote Sensing Training Program; provides trainings, webinars on remote sensing for conservation & biodiversity	https://appliedsciences. nasa.gov/what-we- do/capacity-building/arset				events education geospatial remote sensing
Opportunity	AudioMoth guido	practical guide to AudioMoths; covers supplies, firmware, configurations, recording, enclosures, deployment, data mgmt &	https://github. com/rhine3/audiomoth- guide/blob/master/guide.	Tessa Rhinehart			bioacoustics education
Opportunity	AudioMoth guide	data analysis	md https:	lessa Killilenari			hardware bioacoustics
Opportunity	Bioacoustics Datasets List	A list of bioacoustics datasets that are easily accessible & downloadable, repositories	//bioacousticsdatasets. weebly.com/	Justin Salamon (Adobe)			data management open-source Al/ML
On a national to	Discounties of the second	list of software packages for bioacoustic analyses; split into platforms for acoustic localization, extracting parameters; detection & classification; manual review & annotation; general	https://github. com/rhine3/audiomoth- guide/blob/master/resour	Tanan Dhinahari			bioacoustics education
Opportunity	Bioacoustics software guide Camera trap & machine	resources on camera trap systems using ML, GitHub repos about ML for camera traps, info on smart camera traps, manual labeling	ces/analysis-software.md https://agentmorris.github.io/camera-trap-ml-				software camera traps data analysis/viz data management education images
Opportunity Opportunity	learning info Camera Trap Analysis Methods Comparison table	tools, post-hoc analysis tools, camera trap ML papers, data sources compares known camera trap solutions that aid with detection & species classification; summarizes key features that would aid the typical workflow for an ecologist	https://www.notion. so/Camera-Trap- Pipeline-Solution- Comparison- 2eac80825c4941b0b2b5f ad3daea1cc3	Dan Morris Petar Gyurov			software AI/ML camera traps data analysis/viz data management education images software
			https://www.camtrakker.				camera trap education hardware images
Opportunity	CamTrakker	camera trap buying guides, product reviews, blog	com/				video education funding
Opportunity	Climate Base	discover jobs, people, & organizations working to solve the climate crisis	https://climatebase.org/	Justin Hardin, Evan Hynes			jobs networking

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Opportunity	CompSust Doctorate Consortium	focuses on computational methods for balancing environmental, economic & societal needs for a sustainable future	http://www.compsust. net/compsust-2020/	Cornell University	Ithaca, New York	USA	academic lab data analysis/viz education events jobs
Opportunity	Computer Vision Methods for Ecology school	3-week intensive summer school teaching computer vision methods for ecology, seeking to empower ecologists to accurately & efficiently analyze large image, audio, or video datasets using computer vision	https://cv4ecology.	California Technical University	Pasadena, California	USA	AI/ML data analysis/viz data management education events funding images networking video
Opportunity		provides complete, free & open access to Sentinel-1, Sentinel-2, Sentinel-3 & Sentinel-5P user products; access to mission data through interactive GUI (graphic user interface)	https://scihub.copernicus.	Copernicus Data & Information Access Services (DIAS), European Space Agency			geospatial images marine/aquatic open-source remote sensing software terrestrial
Opportunity	CubeSat	facilitating easy access to space; has developer resources, webinars & online workshops	https://www.cubesat.org/	Cal Polytech, San Luis Obispo, Stanford's Space Systems Dev Lab			education events geospatial hardware remote sensing software
Opportunity	Data Science for Social Good Fellowship	May-August fellowship with a number of environmental data science project options.	https://www. dssgfellowship.org/	Carnegie Mellow University	Pittsburgh, Pennsylvania	USA	academic lab AI/ML climate data analysis/viz data management education jobs
Opportunity	DataKind	matches up data scientist volunteers with nonprofits who need their help	https://www.datakind.org/	Jake Porway			education data analysis/viz networking
Opportunity	Develop for Good	pairs, trains & supports student volunteers as they develop technical product solutions for nonprofits; has grants program to apply for technical help	https://www. developforgood.org/				education funding hardware networking software
Opportunity	Dinacon	combines interaction design & field biology; "unconference" format where the daily activities are led by the participants; 3 basic requirements for participating: make something, document & share it publicly, get recorded feedback from other participants; have catalogue of previous projects; 2022 in Sri Lanka	https://www.2022. dinacon.org/	Digital Naturalism Laboraties (Dinalab)			education events networking hardware marine/aquatic open-source software terrestrial
Opportunity	Earth Hacks	harness the power of hackathons to develop student-driven solutions to the climate crisis; run environmental hackathons; has database of past solutions & results of previous events	https://earthhacks.io/	Sanjana Paul	Claymont, Delaware	USA	AI/ML climate citizen science data analysis/viz education events software
Opportunity	EcoExplore	Experiences Promoting Learning Outdoors for Research & Education; incentive-based citizen science program for children in grades K-8	https://www.ecoexplore.	North Carolina Arboretum	North Carolina	USA	citizen science education events images
Opportunity	ESRI foundation	focus on analyzing & sharing data to advance SDG's; develop geospatial solutions for non-profits pro bono	https://www.esri.com/en- us/industries/sustainabilit y/overview	ESRI			data analysis/viz education geospatial networking remote sensing
Opportunity	Ethical Took Job Poorda Lint	spreadsheet of a bunch of job boards for tech folks	https://docs.google.com/spreadsheets/d/1dF VoF6f9VU5pjaGhyyvQaB N0n6ae- iLCttvsO1N2jhA/htmlview #gid=0	Ted Fickes, Edward Saperia			jobs

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			https://docs.google. com/spreadsheets/d/1G4 XX7WB5dt4D5SFQmecE KVk2xSDRxWVpPOgTD HZf9-				education hardware marine/aquatic networking
Opportunity	Fish Tech Groups	directory of fisheries tech organizations, projects & initiatives	M/edit#gid=1907083143	Kate Wing			software
Opportunity	FishOASIS Underwater Camera	instructions on how to build an underwater optical imaging system for capturing images in low-light aquatic habitats using only ambient light	https://github. com/cpagniel/FishOASIS	Camille Pagniello			bioacoustics camera trap hardware images IoT marine/aquatic open-source
Opportunity	Geolocation analysis guide	light-level geolocation analysis guide with code, examples, & tutorials for different open source software tools	https: //geolocationmanual. vogelwarte.ch/index.html	Lisovski S et al (full author list: https://besjournals. onlinelibrary.wiley. com/doi/full/10.1111/1365-2656.13036)			education data analysis/viz geospatial open-source
Opportunity	Hack for Nature	events, hackathons, webinars, challenges for those from all backgrounds to protect biodiversity through use of new tech	https://www. hackfornature.com/				education events hardware jobs networking software
		gives small equipment grants (\$1,500) to conservation					funding hardware
Opportunity	Idea WILD	professionals community for people who like the make things; gives step-by-step	https://ideawild.org/		Fort Collins, Colorado	USA	local capacity building education
Opportunity	Instructables	instruction guides for thousands of projects, including circuits & electronics; users can post their own guides to add to the platform	https://www.instructables.	MIT Media Lab, Squid Labs			hardware open-source
Opportunity	iWildCam	annual Kaggle competition developing models to classify species & count individual animals across sequences in camera trap datasets		Sara Beery, Elijah Cole, Oisin Mac Aodha, Vighnesh Birodkar			Al/ML camera trap data analysis/viz events images terrestrial
Opportunity	Kaggle Competitions	a huge number of tasks in all different fields - anyone can compete to build the best machine learning model for any of these datasets	https://www.kaggle.com/competitions	Anthony Goldbloom, Ben Hamner			fAI/ML data analysis/viz events funding networking software
Opportunity	KDD Conservation Workshop	annual conference; usually has workshop related to conservation tech; 2020 talk recordings up	https://www.kdd. org/kdd2020/special- days/earth-day	Conference on Knowledge Discovery & Data Mining			data analysis/viz
Оррогили	Workshop	award \$25,000 to 2 climate solutions annually; projects in 5 categories: Capture & Utilization, Energy, Finance, Social &	https://www. globalwarmingmitigationp				climate
Opportunity	Keeling Curve Prize	Cultural Pathways, & Transport & Mobility	roject.org/about-kcp	Mitigation Project	Aspen, Colorado	USA	funding
Opportunity	NatureTech Jobs	job board for nature & tech positions	naturetech.io	Jonathan Clegg	Bristol	United Kingdom	jobs
Opportunity	Pacific Ocean Sound Recordings	passive acoustic data (sound recordings) from a deep-ocean environment off central California; continuous from July 2015; archived on AWS	https://registry.opendata.aws/pacific-sound/	Monterey Bay Aquarium Research Institute (MBARI)			bioacoustics data management marine/aquatic open-source
Opportunity	Portable Genomics	an overview of portable genetic & eDNA technologies, glossary if new to genomics or need refresher & a roadmap for figuring out which steps not to forget when planning experiments; fieldwork equipment checklist, etc.	https://www. portablegenomics.org/	Ineke Knot			eDNA/genetics education marine/aquatic tracking/telemetry
Opportunity	Rainforest Tech Primer	an intro to using tech to monitor & share information on rainforest issues, I& rights & indigenous rights; designed as starting point for organizations/activists interested in adding technology to improve their advocacy work; includes apps, satellite imagery resources, audio/video tools	https://library. theengineroom. org/rainforest-tech/	The Engine Room, Rainforest Foundation Norway			data-/bio-logging data management education images local capacity building mobile app open-source remote sensing terrestrial video
Opportunity	San Diego Zoo Wildlife Alliance Summer Student Fellowships	undergraduate summer fellowship opportunities. Have included conservation tech projects in the past. Population Sustainability research opportunity specifically mentions working in the Conservation Technology Lab	https://science. sandiegozoo. org/opportunities/summer -student-fellowships	San Diego Zoo Wildlife Alliance	San Diego, California	USA	bioacoustics eDNA/genetics education images jobs software

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Opportunity	SANBI Online Resources	has atlases, infobases & resource documents on South African flora & fauna monitoring data (GIS tool, invasive plant tracker, journal article database, species statuses & occurrence records, I& degradation map, SeaKeys (mapping marine biodiversity),	https://www.sanbi.	South African National Biodiversity Institute		South Africa	data management education geospatial GPS local capacity building marine/aquatic open-source software terrestrial
		STEM education & underwater robotics program that equips students/educators with resources to build an underwater remotely operated vehicle (ROV); students can showcase their designs in		,			education events
Opportunity	SeaPerch	competitions	https://seaperch.org/	RoboNation	Arlington, Virginia	USA	hardware marine/aquatic
	Tackling Climate Change with Machine Learning Workshop	annual workshop as part of ICML (2020 webinars recorded & online)	https://www. climatechange.	International Conference on	Jan , J		climate events Al/ML
Opportunity Opportunity	Tech Jobs for Good	helps organizations working on social & environmental issues hire tech talent looking for purposeful work	ai/events/icml2021 https://techjobsforgood. com/	Machine Learning Noah Hart			jobs
Opportunity	Tech Matters	facilitates collaboration to solve social problems using tech; help social change leaders underst& what tech can & can't do & build tech solutions to solve social problems; one of their projects is Terraso - tech partner in 1000 landscapes for 1 billion people	https://techmatters.org/	Jim Fruchterman (Benetech)			AI/ML climate education hardware networking
Opportunity	Tech Tutors webinars	short lectures/tutorials/walk-throughs about different conservation tech topics followed by interactive Q&A	https://www.wildlabs. net/resources/tech- tutors/wildlabs-tech- tutors-season-3	WILDLABS			events education hardware networking software
Opportunity	Techstars Sustainability Accelerator	seek out for-profit entrepreneurs with commercially viable technologies that can rapidly solve conservation challenges globally; mentorship-driven accelerator program connects conservationists, corporate partners, investors & conservationists	https://www.nature. org/en-us/about-us/who- we-are/how-we- work/technology-and- innovation/techstars-	The Nature Conservancy	Boulder, Colorado	USA	climate education events funding networking
Opportunity	The ARK	global business network, professional development & data platform for wildlife conservation organisations, investors, donors, scientists, projects & technology providers	https://theark.co/				data management funding jobs local capacity building networking software
Opportunity	Using Al for camera trap data guide	guide to using existing AI user interfaces for processing camera trap imagery; includes instructions for Wildlife Insights, MegaDetector, MLWIC2 & Conservation AI	https://ai-camtraps. netlify.app/index.html	Juliana Velez, John Fieberg			AI/ML camera traps education images
Opportunity	WildCo camera trap data & R guide	reproducible camera trap data exploration & analysis examples in R; guide to using existing image analysis frameworks with camera trap data	https://bookdown. org/c_w_beirne/wildCo- Data-Analysis/	WildCo Lab, University of British Columbia	Vancouver, British Columbia	Canada	Al/ML camera traps data analysis/viz education images R/Rstudio
		Slack community for people serious about climate work; find	https://workonclimate.	Eugene Kirpichov,	valicouver, British Columbia	ounada	climate funding jobs
Opportunity	Work on Climate	climate jobs, build climate companies, network with people.	org/ https:	Cassandra Xia, Eva Illescas			networking
Opportunity	Workshop on Leveraging Al in Environmental Sciences	3rd annual NOAA workshop open to the public - September 13-17	//2021noaaaiworkshop. sched.com/info	NOAA		USA	AI/ML events
Opportunity	Zooniverse	data labeling for all kinds of different scientific projects - fun way that folks at any level can directly contribute to scientific research in many different fields	https://www.zooniverse.	Chris Lintott, Lucy Fortson			camera trap data management geospatial images remote sensing software video
Organization	4 Earth Intelligence	gather evidence-based intelligence through geospatial data & analystics; aimed at creating actionable & understandable insights for different applications	https://www. 4earthintelligence.com/		Bristol	UK	Al/ML consulting data analysis/viz geospatial software

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Organization	Abalobi	enabling sustainable small-scale fishing communities globally through modular technology ecosystem; apps & software for logging intake, catch monitoring, traceability/supply chain transparency, data dashboards, digital market; e-learning modules & project development resources for fishers; run Fish with a Story initiative	https://ghalahi.org/	Nicolaas Waldeck, Serge Raemaekers, Abongile		South Africa	data management education local capacity building marine/aquatic mobile app software
Organization		global coral mapping initiative; leads Coral Reef Watch; develops habitat maps; has bleaching monitoring system via satellite imagery; measures environmental variable layers (bathymetry,	https://abalobi.org/ https://allencoralatlas.	Ngqongwa NatGeo, University of Queensland, Vulcan, Planet, ASU Center for Global Discovery and Conservation		SouthAirica	wildlife crime prevention data analysis/viz geospatial marine/aquatic remote sensing
Organization	Allen Coral Atlas Allen Institute for Artificial	building Al for the common good; Vulcan environmental tech	org/	Science			software AI/ML bioacoustics images marine/aquatic software
Organization	Intelligence	projects (e.g., EarthRanger, SkyLight) moved here in 2021	https://allenai.org/		Seattle, Washington	USA	terrestrial
Organization	Amazon Conservation Team StoryMaps	map-driven digital storytelling using ArcGIS Story maps; data visualization tool; story maps on Guiana Shield region, indigenous communities, community mapping, threats (deforestation, mining)	https://www. amazonteam. org/storytelling-maps/	Amazon Conservation Team			data analysis/viz geospatial images
Organization	Amibio	Automatic Acoustic Monitoring & Inventorying of Biodiversity; constructs & deploys autonomous multi-sensor monitoring stations & automatically analyze their transmitted measurements for long-term monitoring of biodiversity activity; deploying a prototype hardware system; <0.5 sq m & solar-panel-powered	https://www.amibio- project.eu/				bioacoustics data-/bio-loggingg data analysis/viz hardware remote sensing
_		automated multisensor station for monitoring species diversity;				0	bioacoustics camera trap data-/bio-loggingg
Organization Organization	AniBOS: Animal Bourne Observation System	based in Germany; in testing now AniBOS (Animal Borne Ocean Sensors), an emerging network of the Global Ocean Observing System (GOOS), provides freely available oceanographic measurements across the hard-to-reach world's polar & tropical oceans collected through bio-logging, the deployment of sensors on marine animals	https://ammod.de/			Germany	hardware data-/bio-logging hardware marine/aquatic open-source
Organization	Aqueduct	tools to identify & evaluate water risks around the world (e.g., floods, droughts) using open-source, peer reviewed data; has Water Risk Atlas & country rankings; Food map to identify how water risks factor into food security	https://www.wri. org/aqueduct/	WRI			data analysis/viz geospatial marine/aquatic open-source remote sensing software terrestrial
·	Arduino	open-source electronics platform based on easy-to-use hardware & software; Arduino board can liaise with many sensors; use software to tell Arduino what to do by writing code & using development environment					data analysis/viz education hardware open-source software
Organization Organization	ArduPilot	open source autopilot system supporting drones/AUVs & other unmanned aerial vehicles (UAVs); source code developed & maintained by community or professionals & enthusiasts; has online trainings & events too	https://ardupilot.org/	Chris Anderson, Jordi Munoz			drones/AUV's education events hardware open-source software
Organization	Arribada Initiative	co-develops open, customisable & impact-driven conservation technologies; makers of Horizon developer kit datalogging board (with GPS, Bluetooth, accelerometer, 3G cellular, Argos ARCTIC transmitter); sea-to-source expedition tracking ocean plastic; creating thermal camera system to automatically detect the thermal signature of polar bears to alert local response teams to their presence	https://arribada.org/	TYUTUZ.	Cheshire	UK	camera trap data-/bio-logging education geospatial GPS hardware loT marine/aquatic open-source terrestrial tracking/telemetry
Organization	Atlantic White Shark Conservancy	maintains Sharktivity app (helps experts track individual sharks & shark sightings); White Shark logbook acoustic app; Gills Club educational app	https://www. atlanticwhiteshark.org/	Megan Winton	Chatham, Massachusetts	USA	bioacoustics education mobile app marine/aquatic

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Organization	AtlantOS	Atlantic Ocean Observing System; supports the evolution & implementation of the system as a contribution to the Global Ocean Observing System & the GEO Blue Planet initiative; focusing on research areas: carbon uptake, coastal disaster risk reduction, ecosystem assessment, blue economy/food security, safety at sea	http://atlantos-ocean.org/	Atlantic Ocean Research Alliance, All-Atlantic Research Alliance, KDM, Blue Planet, GEO			data-/bio-logging data analysis/viz events local capacity building marine/aquatic networking remote sensing
Organization	Australian Acoustic Observatory	A2O; national acoustic observaotry, currently at 90 sites; continental-scale acoustic sensor network; data stored on cloud; use Frontier Lab ARUs; data freely accessible in cloud	https://acousticobservatory.org/	Birdlife Australia, QUT Ecoacoustics Group			bioacoustics data management hardware networking terrestrial
Organization	AZTI	scientific & technology center aligned with the UN SDG goals - specializing in climate change, marine ecosystems, sustainable fisheries, & food solutions & security.	https://www.azti.es/en/	Ángel Borja - Scientific Director	Sukarrieta, Pasaia, Derio	Spain	Al/ML climate data analysis/viz drones/AUV's eDNA/genetics geospatial images marine/aquatic software tracking/telemetry
Organization	BearID Project	developing face recognition software for use in wildlife monitoring, starting with individually identifying grizzly bears from camera trap images	http://bearresearch.org/	Melanie Clapham, Ed Miller (Arm)			Al/ML camera trap images software terrestrial tracking/telemetry
Organization	Big Cat Brother	building smart connected devices to avoid unwanted human-jaguar conflict; also publishes information on how to build smart connected devices for conservation	https://dnnacgm11. wixsite.com/bigcatbrother	Carlos Gustavo Merolla		Argentina	Al/ML bioacoustics camera trap data-/bio-logging education GPS hardware IoT local capacity building software
Organization	Biodiversity Information Standards (TDWG)	international collaboration among the creators, managers & users of biodiversity information & to promote wider & more effective dissemination & knowledge sharing; standards include Darwin Core, Audobon Core, Scheme for Recording Plant Distributions; have open-access journal, host conferences	https://www.tdwg.org/		San Francisco, California	USA	data management education events networking
Organization	BioDT	Biodiversity Digital Twin; prototype provides advanced models for simulation & prediction capabilities, through practical use cases addressing critical issues related to global biodiversity dynamics	https://biodt.eu/				Al/ML data analysis/viz
Organization	BIOPAMA	Biodiversity & Protected Areas Management; assists African, Caribbean & Pacific countries address their priorities for improved management & governance of biodiversity & natural resources; has funding arm, observatories system & protected area management platform	https://biopama.org/	IUCN, JRC of European Commission			data management education funding local capacity building remote sensing
Organization	BlueGreen Labs	dedicated to making sense of oceans of data & solving data driven environmental questions; combined expertise in remote sensing, ecological modeling, field surveys, data science & rescue to provide end-to-end research & development solutions		Elizabeth Kearsley, Koen	Melsele	Belgium	climate data analysis/viz geospatial GPS hardware images remote sensing software
Organization	Bonn challenge barometer	universally applicable, systematic framework for identifying, assessing & tracking action of global restoration commitments; considers success factors & results & benefits; currently being trialed in 30 countries	https://infoflr.org/bonn-challenge-barometer	InfoFLR (IUCN)			consulting data management software
Organization	Camelot	camera trap image processing/organization; can download on Mac, PC, Linux; species database for image classification; good documentation, data privacy options; integrates with PRESENCE & camtrapR; multi-user options, metadata error checking feature; can bulk upload, 2 million datasets on it now	https://camelotproject.	Heidi Hendry, Chris Mann			Al/ML camera trap data analysis/viz data management images software
Organization	CarbonMapper	locating, quantifying & tracking methane leaks & CO2 emissions from air & space	https://carbonmapper.	, see a see	Greenbrae, California	USA	climate geospatial remote sensing software tracking/telemetry

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Organization	CarbonPlan	non-profit that analyzes climate solutions, builds open tools/resources for evaluation & deployment of them, improving transparency & scientific integrity of carbon removal	https://carbonplan.org		California	USA	climate consulting data analysis/viz open-source software
Organization	Center for AI	researchers inside & outside of NOAA interested in using AI for the environment	https://www.noaa. gov/topic-tags/artificial- intelligence	NOAA			AI/ML data analysis/viz marine/aquatic
Organization	Center for Conservation Innovation	lead & collaborate on research on conservation laws & policies, develop new tech to collect & communicate actionable conservation data, advocate for science policy; maintain open data portal with code, repo's geospatial data & other documents	https://defenders-cci.org/	Defenders of Wildlife			data management geospatial marine/aquatic networking terrestrial
Organization	Centre for AI and Climate	organization focused on advancing application of data science & Al to accelerate action on climate change	https://www.c-ai-c.org/			UK	AI/ML data analysis/viz climate software
Organization	Cetalingua Project	citizen science platform to enable deep learning research focused on gaining a greater understanding of cetacean communication	https://cetalingua.com/	Natalija Lace		OK .	AI/ML bioacoustics citizen science education marine/aquatic software
Organization	Chorus Acoustics	dedicated to listening to marine ecosystems for conservation & sustainable development; operate underwater recorders & have developed data anlaysis software	https://chorusacoustics.com/	Cedric Gervaise, Julie Lossent	Grenoble	France	bioacoustics data analysis/viz data management hardware marine/aquatic software
Organization	Climate Engine	on-dem& cloud computing & visualization of climate & remote sensing data for decision support related to drought, water use, agriculture, wildfire, & ecology	http://climateengine.org/	Justin Huntington - Desert Research Initiative & John Abatzoglou - UC Merced	Reno, Nevada; Merced, California	USA	AI/ML climate data analysis/viz data management geospatial GPS remote sensing software terrestrial
Organization	Climate TRACE (Tracking Real-time Atmospheric Carbon Emissions)	harnessing satellites & AI to advance green house gas emissions monitoring through direct observation & open data	https://www.climatetrace.org/	Al Gore, CarbonPlan, Carbon Tracker, Earthrise Alliance, Hudson Carbon, OceanMind, Rocky Mountain Institute, Watt Time, Blue Sky Analytics, Hypervine			AI/ML climate remote sensing
Organization	Connected Conservation	NGO bringing tech companies together to design, deploy & fund enabling network infrastructure for protected areas, including point to multi-point WiFi, LoRaWan, digital radios, cameras, sensors & operations hardware; enables threat detection, species monitoring & conservation operations	www. connectedconservation. foundation	NTT, Dimension Data and Cisco		UK (HQ) South Africa Kenya Botswana Indonesia	AI/ML camera trap consulting drones/AUV's funding geospatial GPS hardware loT local capacity building networking remote sensing software
Organization	Conservation Biology Institute	provide technical tools for conservation (geospatial data/analyses, conservation planning & management, statistical analyses, consulting, training), host bespoke decision support tools; host Data Basin (https://databasin.org/) - mapping & analysis platform;	https://consbio.org/		Corvallis, Oregon	United States	climate consulting data analysis/viz data management education geospatial marine/aquatic remote sensing software terrestrial
Organization	Conservation Drones	platform to share knowledge of building & using low-cost unmanned aerial vehicles for conservation-related applications; build local capacity	https:	Lian Pin Koh, Serge Wich		Australia USA Switzerland UK	drones/AUV's education hardware local capacity building

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Organization	Conservation Science Partners Analytics Lab	develop & prototype software, computation environments & data products to monitor I& use, analyze ecosystems, develop climate change projections, etc.	https://analytics-lab.org/		HQ in California (other US offices as well)	USA	climate consulting data analysis/viz geospatial software
Organization	Conservation Technology Information Center	promotes, supports & provides information on conservation technologies & sustainable agricultural systems	https://ctic.org/	Mike Kromp (director)	West Lafayette, Indiana	USA	climate consulting education terrestrial
Organization	ConservationAl	detecting & classifying animals, evidence of illegal activity from pictures & thermal images collected by camera traps, drones (can use 3/4G comm's for real-time monitoring); upload data to site, models (TensorFlow) automatically run them & give you analytics dashboard	www.conservationai.co.	Paul Fergus, Serge Wich, Carl Chalmers, Steven Longmore		UK	AI/ML camera trap data analysis/viz drones/AUV's images remote sensing software wildlife crime prevention
Organization	ConservationX Labs	open source conservation tech projects; makers of Sentinel system: add-on to tech that facilitates embedded ML; NABIT - h& held device that compaes DNA sample to Barcode of Life Database; online makerspace community; launch lots of 'grand' challenge community and the property of the pr	https://conservationxlabs.	Alex Dehgan, Paul Bunje	Washington DC & Seattle,	USA	AI/ML camera trap data-/bio-logging data analysis/viz eDNA/genetics education funding hardware networking
Organization	Conservify	competitions; conservation curriculum toolkit (education) making tools & technologies for conservationists & communities; makers of FieldKit datalogger	http://conservify.org/	Shah Selbe	Washington Los Angeles, California	USA	software data-/bio-logging education hardware marine/aquatic open-source remote sensing software terrestrial
Organization	Cos4cloud	project to boost citizen science technologies, improve citizen observatories; integrated with European Open Science Cloud; works with iSpot, Pl@netNet, Artportalen, Natusfera; facilitating networking between platforms, hosting bioblitzes, datathons, etc	https://cos4cloud-eosc.	EU Horizon	zco, ugoso, canonia		bioacoustics citizen science data-/bio-logging education events images networking video
Organization	COVERAGE	provide improved, integrated & more seamless access to inter- agency, multivariate satellite data for sea surface temperature, ocean vector winds, ocean surface topography, ocean color radiometry	https://coverage.ceos.	NASA, Committee on Earth Observation Satellites, California Institute of Technology			data management geospatial marine/aquatic open-source
Organization	CSIC	maintains open, online portals of monitoring data; has global change observatory that uses indices & indicators to assess status of the habitat	http://icts.ebd.csic. es/global-change- observatory		Doñana Biological Reserve (Huelva & Sevilla)	Spain	climate data-/bio-logging data management open-source software terrestrial
Organization	DaRT	Data Reporting Tool for MEAs; provides private & secure national working spaces for national reporting to biodiversity-related conventions; provides framework of interrelated global & regional goals/targets; can collect & organize info, doc's for national reporting; store/archive info securely for long-term use; share info among collaborators	https://dart.informea.org/	UN Environment Program & InforMEA			consulting data management networking software
		implementing acoustic-based AI tools for marine mammals to fill in gaps for populations that have not been sufficiently researched.	https://www.deepvoicefoundation.				AI/ML bioacoustics
Organization Organization	Deep Voice Foundation Development Seed	Initially focused on humpback whales in Mozambique. engineering & product company accelerating application of accessible geospatial analysis (Cloud Geo), planetary AI, etc. to make evidence-based decisions that benefit the planet	https://developmentseed.org/	Michael Faran	Washington DC Lisbon Ayacucho	USA Portugal Peru	marine/aquatic AI/ML consulting data analysis/viz geospatial hardware remote sensing software

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Organization	DINALAB (Digital Naturalism Laboratories)	jungle prototyping studio for biologists to build their own experimental tools, help designers explore new interactions with nature, & discover new ways of experiencing the natural world. programs focus on forests & wetlands in Africa & South Africa; 4	https://www.dinalab.net/	Kitty Kelly, Andy Quitmeyer	Soberania Rain Forest, Gamboa	Panama	academic lab bioacoustics camera trap citizen science data analysis/viz education hardware images local capacity building mobile app networking open-source software data analysis/viz
Organization	dob ecology	themes - restoration of damaged ecosystems, connection of fragmented habitats, connection with local communities, new analysis methods	https://www.dobecology.		Veesen	the Netherlands	local capacity building marine/aquatic terrestrial
Organization	DOSITS (Discovery of Sound in the Sea)	educational resource hub for decision makers, scientists, educators, & more to learn about sound underwater. They offer webinar series, databases of sounds, archived educational videos, tutorials & many other resources for anyone to view.	https://dosits.org/	The University of Rhode Island, Inner Space Center, Inspire Environmental, NSF, Office of Naval Research, NOAA	South Kingstown, Rhode Island	USA	bioacoustics education events marine/aquatic networking open-source
Organization	Dryad	provides ultra-early fire detection as well as health & growth monitoring solutions for public & private forests; uses Silvanet - large-scale IoT network wish solar-powered sensor nodes, that connect to LoRa distributed gateways; use cloud computing for ulta-early detection of forest fires during smoldering phase	https://www.dryad.net/		Berlin & Eberswalde	Germany	AI/ML consulting data analysis/viz geospatial hardware loT remote sensing terrestrial tracking/telemetry
Organization	DynAlkon	Al tools for biodiversity monitoring - analytical (computer vision, image object detection), augmenting (annotating), learning (machine learning algorithms); specializes in movement & gesture recognition & description	https://dynaikon.com/		London	UK	Al/ML data analysis/viz images software
Organization	Earth Species Project	open-source collaborative & nonprofit dedicated to decoding animal communication	https://www. earthspecies.org/	Aza Raskin, Britt Selvitelle, Katie Zacarian			bioacoustics open-source
Organization	EarthRanger	protected area management platform, real-time data processing from ranger patrols, remote imaging, sensors; used to respond to threats, track animal movements, underst& l& use change	https://earthranger.com/	Vulcan/Allen Institute for Artificial Intelligence	Seattle, Washington	USA	camera trap data analysis/viz data management geospatial images local capacity building remote sensing terrestrial wildlife crime prevention
Organization	eBioAtlas	creating global atlas of life for Earth's rivers & wetlands using eDNA; interfaces with IUCN RedList & GBIF, freely available	https://ebioatlas.org/	NatureMetrics, IUCN			data management eDNA/genetics marine/aquatic software
	Ecosystem Service	guidelines for selecting & planning policy & financing instruments to				_	
Organization Organization	Opportunities enviroLENS	conserve ecosystems & enhance sustainable livelihoods Copernicus for law enforcement; ready-to-access evidence of environmental incidences & legal violations, eLENS alert system	www.es-opportunities.net	Julian Rode GeoVille, IUCN, Sinergise, DLA Piper, Al Lab	Leipzig	Germany	consulting geospatial local capacity building remote sensing software terrestrial
		effort to make credible evidence about impacts & effectiveness of	https://www.evidensia.	WWF, Rainforest Alliance,			consulting software
Organization	Evidensia	& practice convergence of initiatives by different org's to collectively address	eco/	iseal			data management consulting
Organization	Eye on Earth	global challenge of increasing access to info & improving decision making to support sustainable development	https://eye-on-earth.net/				data analysis/viz networking
Organization	Field Papers	tool for digitizing field notes/annotations; make an atlas & print, take into the field & mark up, upload photo's of pages/atlas ("snapshots"), & it integrates with atlas it came from; don't need GPS/GIS skills	http://fieldpapers.org/	Stamen Design, USAID			data management software

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							Al/ML climate citizen science data-/bio-logging data analysis/viz data management hardware
Organization	FieldKit	accessible & scientifically validated open source environmental sensors, datalogger, Android/iOS app, data visualization/conversation platform	FieldKit.org	Conservify, Shah Selbe	Los Angeles, California	USA	marine/aquatic mobile app open-source software terrestrial
Organization	Flash Forest	developing tech for drone-based, automated reforestation	https://flashforest.ca/	Bryce Jones, Angelique Ahlstrom, Cameron Jones	Toronto	Canada	drones/AUV's hardware tracking/telemetry
Organization	Foundations of Success	promote learning & collaboration in conservation community through conservation management framework	https://fosonline.org/	Richard Margoluis, Nick Salafsky, Janice Davis	Europe, USA & Latin America branches	USA Uruguay the Netherlands	data management education funding networking software
Organization	GeoKey	provides server-side components to run participatory mapping projects; can create custom data structures; integrate pictures & videos with maps; access data via open REST API for data collection, visualization & analysis; can manage access through user groups; has community platform for discussions & knowledge sharing	https://geokey.org.uk/	Extreme Citizen Science group/Univ College London		UK	data analysis/viz data management geospatial GPS images networking software video
Organization	GeoNature	web & mobile app for entering, managing & disseminating fauna & flora data in France; GeoNature (for web entry, data export), Occtax (mobile entry), GeoNature-citizen (open citizen data collection), TaxHub (managing taxonomy)	https://geonature.fr/	National Parks of France			citizen science education mobile app networking open-source
Organization	Global Airborne Observatory	Earth imaging tech; featuring AToMS (airborne taxonomic mapping system) which has VSWIR imaging spectrometer, wLiDAR scanner, VNIR imaging spectrometer, high-res imaging camera	https://gao.asu.edu/	Center for Global Discovery & Conservation Science (Arizona State Univ)			data analysis/viz data management geospatial hardware images remote sensing
Organization	Global Canopy	provides open-access data, metrics, actionable insights to companies, financial institutions, governments & non-profits to increase transparency & accountability in supply chains, markets; makers of Trase, Trase Finance, Forest 500, ENCORE & Task Force for Nature-related Finncial Disclosures	https://globalcanopy.org/		Oxford	UK	climate consulting data analysis/viz open-source software
J	,	world's largest shark & ray survey; using baited remote underwater		Florida International University, Stony Brook University, James Cook University, Australian Institute of Marine Science, Curtin University, Dalhousie			camera traps citizen science marine/aquatic
Organization	Global FinPrint	video systems (BRUVS) to survey coral reefs around the world create & share knowledge about human activity at sea to enable	https://globalfinprint.org/	University	North Miami, Florida	USA	video data analysis/viz data management geospatial marine/aquatic
Organization	Global Fishing Watch	fair & sustainable use of oceans; monitoring vessels, compliance/transparency, open-source datasets, data viz & analysis tools	https: //globalfishingwatch.org/	Oceana, SkyTruth, Google			open-source remote sensing tracking/telemetry data analysis/viz
Organization	Global Forest Biodiversity Initiative	GFBI studies & manages largest tree-level forest inventory database; >1.2 million plots from 70+ countries; you can contribute your data or request data already in the database	www.gfbinitiative.net			China Switzerland USA Spain	data analysis/N2 data management networking open-source terrestrial
Organization	Global Forest Watch	open source platform that uses satellite imagery & other data sources to monitor forests around the world; GLADD deforestation notifications, fire alerts, interactive map seeing how I& is being used, forest cover	https://www. globalforestwatch.org/	World Resources Institute (WRI)	Washington DC	USA	data analysis/viz geospatial images mobile app open-source remote sensing software terrestrial

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Organization	Global Mangrove Watch	provides remote sensing data & tools for monitoring mangroves to protect & restore them; near real-time info on mangroves worldwide; gives info on topography, soil conditions, hydrology	https://www. globalmangrovewatch. org/	World Resources Institute (WRI), Global Mangrove Alliance, Vizzuality			data-/bio-logging data analysis/viz education geospatial remote sensing
Organization	GloBAM	uses weather radar data to quantify the biomass flows of aerial migrants across Europe & North America	https://globam.science/	Swiss Ornithological Institute, Univ of Exeter, Cornell Lab of Ornithology, Univ of Amsterdam, Finnish Meteorological Institute, INBO			data-/bio-logging data analysis/viz funding geospatial software tracking/telemetry
Organization (Green Earth Alliance	creates perpetual funding for conservation projects through Web 3.0 technologies like NFTs, IoT, AI/ML & robotics	https: //greenearthalliance. org/linktree/	Yelka Mikolji	Delray Beach, Florida	United States	consulting funding
Organization	Group on Earth Observations (GEO)	runs GEO BON programs; intergovernmental partnership improving availability, access & use of Earth observations for a sustainable planet; building GEOSS - Global Earth Observation System of Systems (geoportal.org); also runs Global Forest Observation Initiative, Global Ecosystem Initiative, Global Network for Observation & Info in Mountain Environments (GNOME); early warning system for algal blooms, soils map for Africa, global monitoring system for mangroves, natural capital & ecosystems accounting	https://earthobservations.	iDiv, German Science Foundation			consulting data analysis/viz data management geospatial marine/aquatic networking remote sensing software terrestrial
·		make smart camera traps to detect poachers in protected areas, sends alerts to rangers; on-board image processing/edge	https://www.	Thijs Suijten, Tim van Deursen (Hack the Planet,			AI/ML camera trap IoT
Organization Organization	Hack the Poacher	computing using AI for real-time detection International Cooperation for Animal Research Using Space; "Internet of Animals" interactive platform that allows users to track animals around the world in near-real time; scientists working to develop a satellite-based system to track animals, particularly migratory ones	https://www.icarus.mpg.	Martin Wikelski & Uschi Müller (Max Planck), Olga Solomina (Russian Academy of Sciences), Movebank/Konstanz, Germany	The Hague	the Netherlands	wildlife crime prevention data-/bio-logging data management geospatial marine/aquatic networking terrestrial tracking/telemetry
Organization	Impact Observatory	Al products for entities to use with tools like carbon mapping, human & biodiversity impacts, sustainability, carbon reduction, l& use/cover maps	https://www. impactobservatory.com/	Steve Brumby, Sam Hyde	Washington DC & Santa Fe, New Mexico	USA	Al/ML climate data analysis/viz geospatial software
Organization	Instant Wild	brings citizen science users live images & videos from cameras around the world, users can tag animals to help conservation research; app & online; requires consensus between multiple users for image to be put into research database; currently in Brazil, Croatia, Borneo, Italy, Mexico, Kenya, Costa Rica, Russia, UK, some others	https://instantwild.zsl.org/	Zoological Society London	London	UK	camera trap citizen science data management data analysis/viz images mobile app software video
Organization	International Barcode of Life	reference library of DNA barcodes for >9 million species of fauna, flora & fungi; tracking ecosystems & revealing symbiomes	https://ibol.org/				data analysis/viz data management eDNA/genetics
Organization	Key Conservation	helping conservationists gain critical funding & global support through mobile app that provides real-time updates on day-to-day campaigns; matching those with money, skills, etc. with conservation organizations working on particular projects	https://www. keyconservation.org/	Megan Cromp			education funding local capacity building mobile app networking software
Organization	KoBoToolbox	suite of tools for field data collection for use in challenging environments; free & open-source; initially built for use in humanitarian crises; consists of Form Builder app, KoBoCollect data collection app (online & offline); Analysis app that creates summary reports, visualizes data, disaggregates data; accessed through KoBo API	https://www.kobotoolbox.	Phuong Pham, Patrick Vinck	Cambridge, Massachusetts	USA	data analysis/viz data management mobile app open-source software
Organization	Kopernik	help organizations navigate the seemingly complex world of digital tech; a free, online catalog of affordable, simple tools for data collection, communication & measurement/evaluation; has categories of mobile data tools, GIS tools, remote sensors, & data analysis/viz tools	http://impacttrackertech.kopernik.info/	Impact Tracker Tech	J		data management education GPS local capacity building mobile app software
Organization	Landscale	helps companies assess & communicate sustainability impacts at landscape scale	https://www.landscale.	Rainforest Alliance for Business			consulting geospatial

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Organization	Living Planet Technology Hub	directory of conservation tech resources, projects & tech challenges; 6 cons tech areas - camera traps, eDNA, conservation drones, remote sensing technology, ML & Al, blockchain tech	https://techhub.wwf.ca/	World Wildlife Fund (WWF-Canada)			Al/ML bioacoustics camera trap data-/bio-logging data analysis/viz drones/AUV's eDNA/genetics education funding geospatial local capacity building marine/aquatic remote sensing software terrestrial tracking/telemetry
Organization		non-profit tech alliance enabling large-scale deployment of low power wide area networks, loT, through development of LoRaWAN open standard; standardized & accredited certification scheme to deliver inter-operability; LoRaWAN is a networking protocol designed to wirelessly connect battery-operated things to the	inposit control www.sa	Sunaday			data management education events IoT
Organization	LoRa Alliance	internet in regional, national, etc. networs & targets IoT requirements	https://lora-alliance.org/		Fremont, California	USA	networking software AI/ML
		projects include gamifying nature conservation, redefining conservation NGOs, responses to corruption in natural resource	https://luchoffmanninstitute.				consulting education events funding
Organization Organization	Luc Hoffman Institute MAAP	Monitoring of the Andean Amazon Project; real-time monitoring of 85% of Amazon using remote sensing technologies, drones, radar, analytical algorithms; technology delivers actionable information that provides a transformational tool for governments & local people to rapidly detect deforestation as it is happening	org/	Amazon Conservation	Gland	Switzerland	local capacity building data analysis/viz drones/AU/'s geospatial GPS hardware images local capacity building remote sensing terrestrial wildlife crime prevention
-		open-source cloud solution for mapping & monitoring the sustainable use of natural resources; partnered with UN Environment & the World Environment Situation Room, their data &		UNEP, World Bank, Global Resource Information			data analysis/viz data management geospatial open-source remote sensing
Organization Organization	MapX	knowledge platform; has online data workspace decision-support tool that helps structure, design & evaluate spatial planning projects for conservation by balancing objectives such as protecting biodiversity & its benefits, with socio-economic, cultural & political realities; has community forum; integrating with Azure for cloud computing/storage; has learning library of online resources, tutorials	https://www.mapx.org/ https://marxansolutions.org/	Database			software AI/ML data management education networking open-source software
Organization	Miradi Share	project management software for conservation practitioners to practice evidence-based conservation at scale; complements Conservation Standards; has online & desktop versions	https://www.miradishare.org/ux/home	Foundations of Success, Sitka Tech Group, Conservation Measures Partnership, Benetech			data management education local capacity building software
Organization	Movement of Life	advance research & conservation of mobile species; using marine acoustic telemetry, PIT tags/geo locators/ satellite transponders for avian tracking, GPS for terrestrial tracking; ctmm R package for analyzing animal tracking data (also as a GUI); analysis tools for home range estimation, energy expenditure, encounter rates	https://movementoflife.si.edu/	Smithsonian Institute			bioacoustics data-/bio-logging data analysis/viz GPS R/Rstudio marine/aquatic terrestrial
Organization	National Geographic Exploration Technology Lab	Developing & deploying extreme environment technologies that provide unprecedented insights into some of the most extreme & inaccessible environments & cultural heritage sites on Earth.	https://www. nationalgeographic. org/projects/labs/	National Geographic			AI/ML bioacoustics camera trap drones/AUV's geospatial hardware images marine/aquatic terrestrial tracking/telemetry video

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Organization	Nature Bytes	build your own Raspberry Pi wildlife cameras - Cam Kit	http://naturebytes.org/	Stephen Mowat, Alasdair Davies, Jon Fidler			camera trap hardware images open-source video
Organization	Nature4Climate	advocating for & demonstrating breadth of I& management options, facilitating dialogue around nature-based solutions, sharing knowledge, providing communications resources	https://nature4climate.				climate education networking
Organization	NatureMetrics	eDNA leader, co-running the eBioAtlas (see also their industry report on use of eDNA for biodiversity	https://www. naturemetrics.co.uk/		Surrey	UK	data analysis/viz eDNA/genetics marine/aquatic terrestrial
Organization	NatureServe	America's-focused, has conservation database, standards & methods, mapping (hotspots, at-risk, biodiversity indicators dashboard), iMapInvasives, climate change vulnerability index	https://www.natureserve.		Arlington, Virginia	USA	climate data management geospatial remote sensing software
Organization	NatureSpy	citizen-science platform for camera-trap data; makes own trail cam (\$100), WiFi-enabled; has 'camera trap chooser' tool; have trail cam trainings	https://www.naturespy.		Liangollen	Wales	camera trap education events hardware images terrestrial video
Organization	Ocean Discovery League	expanding access to deep sea exploration by developing AI tools to analyze ocean video & imagery, low-cost deep-ocean sensors, global capacity with local communities		Katy Croff Bell	Saunderstown, Rhode Island	USA	Al/ML data-/bio-logging data analysis/viz education hardware local capacity building marine/aquatic remote sensing
Organization	Ocean Observatories	science-driven ocean observing network that delivers real-time data from >800 instruments to address critical science questions regarding oceans	https://oceanobservatories.org/	Woods Hole Oceanographic Institution, University of Washington, Oregon State University	Woods Hole, Massachussetts	United States	climate data-/bio-logging data analysis/viz data management hardware marine/aquatic
Organization	Ocean Visions	network linking resources, expertise & people to develop applied solutions to ocean challenges; projects include: ocean carbon dioxide removal, coastal solutions for climate resilience, circular ocean bioeconomy	https://oceanvisions.org/	Georgia Tech, Smithsonian, Scripps Institute, Stanford, Univ of Georgia, UC Santa Barbara, Birch Aquarium, Woods Hole, MIT, Georgia Aquarium, MBARI, Monterey Bay Aquarium			climate consulting hardware local capacity building marine/aquatic
		platform providing world's decision-makers & communities of practice with the best possible global info, knowledge & tools to manage & conserve ocean ecosystems; Ocean+ Library, Ocean_Habitats, Protected Planet-Marine, Ocean Data Viewer	https://www.oceanplus.	GEO BON, Proteus, UNEP			consulting data analysis/viz data management education marine/aquatic
Organization Organization	Ocean+/Ocean Plus OceanMind	powers marine enforcement & compliance to protect the ocean using satellites & Al	https://www.oceanmind.	WCMC, Protected Planet	Didcot	UK	software AI/ML consulting data analysis/viz data management images marine/aquatic remote sensing software
Organization	Oceans Unmanned	facilitating the use of unmanned technologies & promoting their safe & environmentally conscious operation through education and outreach; makers of ECO-drone; developed best-practices, policies for drone use with wildlife		Matt Pickett, Brian Taggart	Santa Barbara, California	United States	drones/AUV's education tracking/telemetry
Organization	Open Acoustic Devices	maker of the AudioMoth (passive acoustic recorder, \$60 on GroupGets, \$85/unit for direct buy on LabMaker), also AudioMoth Dev (dev board); uMoth (5g); waterproof cases for AudioMoth \$40 (can buy with units); has desktop & mobile apps for firmware, configuration	https://www. openacousticdevices. info/	Alex Rogers, Andrew Hill, Peter Prince, Jake Snaddon, Evelyn Piña Covarrubias, Patrick Doncaster, Lydia Katsis		C.mod States	bioacoustics hardware mobile app software terrestrial
Organization	Open Data Kit (ODK)	app to build offline forms to collect data wherever needed; open-source, analytics built-in	https://getodk.org/				data analysis/viz mobile app open-source

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Organization	Open Foris	free open-source solutions for environmental monitoring; set of software tools that include: Arena, Collect, Collect Earth (survey design, data mgmt), Collect mobile (app), Calc (data analysis), SEPAL (earth observations, data access & processing), Earth Map (Google Earth Engine access without coding); host events & webinars; has online user forum	http://www.openforis.org/	UN FAO, World Bank, Forest Carbon Partnership, Servir, Int'l Climate Initiative & gov'ts of Finland, Germany, Norway			data analysis/viz data management events mobile app open-source software
Organization	Орентона		птр.л/www.орстюлз.огд/	Germany, Norway			GPS hardware
Organization	OpenCollar	design, support & deploy open-source tracking collar hardware & software for widlife monitoring projects; starting with an Elephant collar with Smart Parks-Elephant Edge; GPS-LoRaWAN collars	https://opencollar.io/	Smart Parks			loT terrestrial open-source
Organization	OpenDroneMap	drone mapping software with WebODM user interface & ODM (from comm& line); for processing, analyzing & displaying aerial data from drones; can do orthomosaics, point clouds, elevation models, 3D models, measurements, contours, multispectral images, etc.; connects to Cloud, has Python SDK, FIELDimager R package, Node.js API; also has community forum	https://www. opendronemap.org/				data analysis/viz data management drones/AUV's geospatial networking open-source python R/Rstudio remote sensing
Organization	Panorama Solutions	partnership promoting examples of inspiring, replicable solutions across a range of conservation & development topics to enable	https://panorama.	UNEP, IUCN, Rare, GEF,			education local capacity building
Organization Organization	Planet Tracker	cross-sectoral learning & upsacling of successes non-profit think tank aligning capital markets with planetary boundaries by investigating risk of market failure related to environmental limits (focusing on oceans, food & l& use, textiles, plastics)	solutions/en_ https://planet-tracker.org/	World Bank Group Investor Watch		UK	consulting climate data analysis/viz
Organization	Figure Hacker	NGO supporting I& management & business practices that benefit people, nature & climate (sustainability certification services,	https://preferredbynature.	IIIVestoi vvatori		UK	climate consulting data management
Organization Organization	Preferred by Nature	awareness raising, capacity building) platform that uses AI to indicate areas at risk of deforestation (topography, I& cover, roads, infrastructure, socioeconomic data) in the Brazilian Amazon; provides data viz & analytics dashboard	https://previsia.org/	Imazon, Microsoft, Fundo Vale	offices in 25 countries		local capacity building AI/ML data analysis/viz geospatial local capacity building remote sensing terrestrial
Organization	Project CETI	Cetacean Translation Initiative; applying ML & gentle robotics to decipher the communication of sperm whales; have a marine conservation fellowship program	https://www.projectceti.	David Gruber		Dominica USA	Al/ML bioacoustics data-/bio-logging data analysis/viz drones/AUV's education funding marine/aquatic open-source
·	·	uses sound to detect biodiversity & understand relationship between biodiversity & land cover, land uses & resource	http://www.projectdhvani.	Puth DeFries		India	bioacoustics local capacity building remote sensing
Organization Organization	Project Dhvani Protected Planet	management using automated detection methods most up to date & complete source of data on protected areas & other effective area-based conservation measures (OECMs), updated monthly with submissions from governments, ngo's, communities, etc.; hosts World Database on Protected Areas, World Database on OECMs, Global Database on Protected Area Management Effectiveness; has lots of data viz tools	https://www. protectedplanet.net/en	Ruth DeFries UNEP WCMC, IUCN		India	terrestrial data analysis/viz data management education geospatial local capacity building marine/aquatic networking open-source software terrestrial
Organization	Radiant Earth Foundation	open, neutral Earth imagery for programmers & geospatial community to support decision-makers working on global development challenges; develop Earth observation machine learning libraries & models through open source hub; fosters community of practice to develop standards around machine learning for Earth observation & provide info on progress in Earth observation marketplace	https://www.radiant.earth/about/		Washington DC	USA	AI/ML data management education geospatial networking open-source remote sensing software

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Organization	Rainforest Connection (RFCx)	makers of ARBIMON, a free analysis software for PAM data & Guardians, PAM devices made from recycled cell phones deployed arboreally; Using tech & big data to enable on-the-ground partners to save the world's most threatened rainforests & habitats	https://rfcx.org/	Topher White	San Francisco, California	USA	Al/ML bioacoustics data-/bio-logging data analysis/viz hardware software terrestrial tracking/telemetry
Organization	REDD+	Reducing Emissions from Deforestation & Forest Degradation; carbon offsets framework that creates financial value for carbon stored in forests (aim is to reduce deforestation through voluntary action); use independent, third-party standards for evaluation, validation, monitoring & auditing	https://www.reddimpact.	United Nations			climate consulting data analysis/viz local capacity building funding geospatial
Organization	Reef Life Survey	interactive digital tool for tracking the health of vital reef ecosystems globally (but Australia focused); train citizen science divers to collect data; maintain Reef Species of the World database; Reef Life Explorer - online interactive map with different indicator variables; all survey data open-access through online database	https://reeflifesurvey.com/			Tasmania, Australia	citizen science data management education events geospatial images marine/aquatic open-source remote sensing software tracking/telemetry
Organization	ReefBase	maker of ReefGIS, global information system for coral reefs; has global database of coral reef research; can create custom maps in online GIS system; has webinars & events	http://www.reefbase. org/main.aspx	WorldFish			data-/bio-logging education events geospatial GPS marine/aquatic networking software
Organization	RESOLVE	working with local, multi-sector constituencies for targeted l& protection & restoration; designs conservation tech; makers of the TrailGuard Al camera (stop poachers & protect parks), quick response fund for nature; maintains Global Safety Net map	https://www.resolve.ngo/		Washington DC Vancouver Colombier	USA Canada Switzerland	Al/ML camera trap data management funding hardware local capacity building images geospatial wildlife crime prevention
Organization	Resource Watch	cloud-based platform with hundreds of datasets on state of planet's resources & citizens; has dashboards for forests, oceans, food, society, climate, energy, cities & water; can create personalized alerts; open-access data	https://resourcewatch.	WRI in collab w/ 20 other companies & org's			camera trap climate data analysis/viz data managament local capacity building geospatial marine/aquatic open-source remote sensing software terrestrial
Organization	Restor	informing & connecting the global restoration movement; map- based, open-source platform that combines on-the-ground knowledge, ecosystem research & satellite imagery to plan, manage & monitor restoration projects; currently 50,000 sites registered	https://restor.eco/	Thomas Crowther (ETH Zurich)	Zurich	Switzerland	data management geospatial images open-source remote sensing software
Organization	Rhino Force	direct-action organization using innovative surveillance & anti- poaching tech to preserve rhino genes (maintain cryo/biobank), prevent rhino killings & expose illegal wildlife activities in Southern Africa	https://rhino-force. org/index.html	,		South Africa, Zimbabwe	eDNA/genetics remote sensing terrestrial tracking/telemetry wildlife crime prevention
Organization	SAFE Acoustics	automating biodiversity monitoring in Borneo via passive acoustics (use real-time acoustic monitoring units that they developed; based off RasPi, powered by solar panels & connected to internet via 3G phone signal, so can continuously record & upload data for long durations; this hardware is open-source with step-by-step instructions at rpi-eco-monitoring.com	http://acoustics. safeproject.net/	SAFE Borneo		Borneo	bioacoustics hardware open-source

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Occasiontics	Canalli	open-source project that facilitates data collection across language or literacy barriers through highly configurable icon-driven user interfaces; mobile app & online platform; ZSL has a project with		Extreme Citizen Science		luz.	data management local capacity building mobile app open-source software
Organization	Sapelli	them for reporting wildlife crime	http://www.sapelli.org/ https://www.loughs-	group at Univ College	London	UK	wildlife crime prevention bioacoustics
Organization	SeaMonitor	using "smart" buoys, acoustic receivers between Ireland & Scotland to create spatial models for marine mammals & fish, oceanographic models & contribute to management plans	agency.org/managing- our-loughs/funded- programmes/current-	Loughs Agency	Carlingford, Derry	Ireland	geospatial hardware marine/aquatic remote sensing tracking/telemetry
Organization	SEPAL	system for earth observations, data access, processing & analysis for l& monitoring; allows users to query & process satellite data quickly & efficiently; tailors product for local needs; produces sophisticated & relevant geospatial analyses quickly via cloud-based computing; has integrations with R, Shiny, Jupyter, Google Earth Engine, Open Foris	https://sepal.io/	UN FAO, Open Foris team			consulting data analysis/viz data management geospatial remote sensing software
Organization	Skylight	helps improve maritime transparency & provides actionable intelligence (IUU fishing) to protect oceans & wildlife; real-time tracking; can identify suspicious vessel behavior & alert authorities who can investigate & take enforcement/compliance action when necessary	https://www.skylight.	Vulcan/Allen Institute for Artificial Intelligence	Seattle, Washington	USA	data analysis/viz marine/aquatic software tracking/telemetry wildlife crime prevention
Organization	SkyTruth	uses remote sensing, satellite imagery & digital mapping to alert citizens, journalists, researchers, policymakers & conservation groups to the harmful impacts of human activities on the environment; 4 program areas - freshwater, oceans, biodiversity, climate; use data from 8 satellites; use AI, ML, AIS, cloud computing to create maps & data viz products	https://skytruth.org/	John Amos			AI/ML climate consulting data analysis/viz data management geospatial images marine/aquatic open-source remote sensing software terrestrial
Organization	SMART	Spatial Monitoring & Reporting Tool; online, desktop & mobile platform for protected area management; SMART Mobile/Collect for collecting ranger-based data (has survey plug-in for managing ecological surveys; Desktop can process, store, evaluate & visualize data; Connect - for storing, sharing, managing data on web-connected database	https: //smartconservationtools. org/	WCS, WWF, GWC, ZSL, NC zoo, FZS, Panthera, Peace Parks			data-/bio-logging data analysis/viz data management events local capacity building mobile app networking software tracking/telemetry wildlife crime prevention
Organization	Smart Parks Network	has hardware (ear tags, collars, acoustic sensors, gate sensors, vehicle tracker); deploying sensor/comm's networks (LoRa) in parks to track wildlife, monitor illegal activity, etc; data uploaded to web app to provide real-time info	https://www.smartparks.	Tim van Dam, Jeroen de Looze, Steve Roest, Laurens de Groot			bioacoustics camera trap data-/bio-logging data management hardware loT local capacity building mobile app remote sensing software wildlife crime prevention
Organization	SmartBuoys	autonomous systems that are moored, automated, multi-parameter recording platforms used to collect marine environmental data	https://www.cefas.co. uk/data-and- publications/smartbuoys/			UK	data-/bio-logging hardware marine/aquatic
		aiming to preserve the sounds of the earth & support bioacoustic research; collaborates with "planetary artists" to spread	https://soundearthlegacy.				bioacoustics
Organization	Sound Earth Legacy	conservation messages	org/ https://www.	Andrea Lamount	Barcelona	Spain	education bioacoustics images video
Organization Organization	Sounding Wild Soundscapes to Landscapes	advancing animal biodviersity monitoring via Earth-observing satellites; coupled with passive acoustic monitoring; citizen-science based, then upload data for soundscape analysis	soundingwild.com/ https: //soundscapes2landscap es.org/	Axel Drioli Andrea Lamount	Barcelona	Spain	software bioacoustics citizen science data analysis/viz geospatial remote sensing tracking/telemetry

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		supports financial sector & supply chain stakeholders to manage ESG risk through transparency assessments of soft commodity producers & traders; currently assesses for palm oil, natural rubber,					consulting
Organization	SPOTT	timber & pulp	https://www.spott.org/	Zoological Society London	London	UK	data analysis/viz
Organization	Sri Lankan Turtle ID Project	uses pattern recognition systems in order to create a digital "fingerprint" for turtles found in Sri Lankan waters	https://turtleidsrilanka. org/	Chathurika Munasinghe & Randunu Dimeshan - Collaboration between Polhena Diving Center and OCEA Sri Lanka		Sri Lanka	AI/ML citizen science data analysis/viz education images marine/aquatic software hardware
				Sara Spangelo, Ben			IoT
Organization Organization	Swarm Swiss Data Cube	low-cost, 2-way, affordable global satllite conectivity for IoT devices support the Swiss government for environmental monitoring & reporting & enable Swiss institutions to facilitate new research using SDC datasets & Earth observation data	https://swarm.space/ https://www. swissdatacube.org/	GRID-Geneva, University of Geneva	Mountain View, California	USA Switzerland	local capacity building consulting data analysis/viz data management geospatial open-source software
Organization		allows users to view & interact with animal tracking data (from camera GPS tags), oceanographic datasets & marine life observation; uses Google Earth Engine; tagged species include sharks, tuna, seals, sea turtles; also buoy & glider dataloggers	http://www.topp.org/				camera trap data-/bio-logging data analysis/viz geospatial GPS hardware images marine/aquatic remote sensing tracking/telemetry video
Organization	TagLab	aquatic biotelemetry tag maker - biologging camera tags, iTag for soft-bodied invertebrates, dTag for acoustic recording; online tracking data viewer for Shark Cam & Turtle Cam	https://www2.whoi. edu/site/taglab/	Woods Hole Oceanographic Institute	Woods Hole, Massachusetts	USA	bioacoustics data-/bio-logging GPS hardware images marine/aquatic tracking/telemetry
		support land & forest defenders by recommending them free & open-source software (FOSS) designed to help their daily lives against climate change; interview developers, to understand needs		Narrira Lemos, Luciana Ferreira, Márcia Nóbrega,			data analysis/viz networking open-source
Organization	Tech for Forests	& challenges	https://techforforests.org/	Bruno Rigonato			software AI/ML
Organization	TerrAdapt	cloud-based platform that uses the remote sensing & Al capabilities of Google Earth Engine to dynamically monitor habitat & connectivity, project future conditions given future climate & landuse scenarios & prioritize areas for conservation actions; webbased mapping and reporting tools	https://terradapt.org/	Carly Vynne, Andrew Shirk			consulting data analysis/viz data management geospatial remote sensing
		specialize in large-scale collection & process of wildlife data		Alayna van Dervort, Tanya			AI/ML consulting
Organization	The Big Wild	utilizing Al & ML; maintain conservation tech data libraries	https://thebigwild.com/	Berger-Wolf			networking
Organization	The Nature Conservancy Agility Lab	rapid prototyping lab for solutions related to wildlife conservation, forest health, floodplain management, water security, etc.	https://www.nature. org/en-us/about-us/who- we-are/how-we- work/technology-and- innovation/agility-lab/		Boulder, Colorado	United States	climate data analysis/viz data management local capacity building marine/aquatic terrestrial
Organization	Trends.Earth	platform for monitoring & tracking I& change (productivity, I& cover, soil organic carbon) using earth observations in a desktop + cloud-based system	https://trends. earth/docs/en/	Conservation International			data analysis/viz geospatial GPS remote sensing software tracking/telemetry
Organization	Trillion Trees	joint venture to scale up reforestation, restoration; advocate for reforestation policy	https://trilliontrees.	WCS, WWF, Birdlife			data analysis/viz education geospatial networking
Organization	UN Biodiversity Lab	provides access to global public data on people & planet; democratizes access to spatial data & analytic tools; supports decision-makers to leverage spatial data; empowers stakeholders to use spatial data for monitoring & reporting; offer free workspaces for stakeholders to use its tools in a secure (virtual) environment		UNDP, UN Environment & CBD Secretariat			consulting data management geospatial local capacity building open-source remote sensing software

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Organization	USAID GeoCenter	uses geospatial technology, data analytics & visualization techniques to improve the strategic planning, design, monitoring & evaluation of Agency programs; incorporates economic, demographic & geographic information to generate custom analyses & maps for USAID field Missions	https://www. digitaldevelopment. org/geocenter	US Agency for International Development (USAID)	Washington DC	USA	data analysis/viz education geospatial GPS remote sensing software
Oweningthe	No. 1 dr.	building joint large-scale computer vision systems around communities of experts; outputs include the Seek by iNaturalist app, the Merlin Bird ID app, & the Fine Grained Visual		Led by Pietro Perona and Serge Belongie, members include Oisin mac Aodha, Grant van Horn, Sara Beery,	_		AI/ML bioacoustics camera trap
Organization Organization	Visipedia Waterbear	Categorization Workshop challenges video on-dem& platform dedicated to the future of the planet; free membership, no subscription fees, no ads; 100s of nature/environmental documentaries; can also connect to ngo's featured in films, take specific actions	https://visipedia.github.io/ https://www.waterbear. com/	Elijan Cole	?		mobile app education marine/aquatic terrestrial video
-		leverage AI to deliver better, simpler & faster whale detection data (uses aerial, satellite & infrared data); Mobius-aerial images	https://www.whaleseeker.				Al/ML data analysis/viz geospatial images marine/aquatic remote sensing
Organization	Whale Seeker	builds open software & artificial intelligence for the conservation research community; offer free & paid services, including: Azure cloud hosting of Wildbooks, annotation of photographic data, custom computer vision/ML model development; host Wildbooks, which track individual animals using markings, citizen science engagement, ML pattern matching for photo IDs (Flukebook, MantaMatcher, GiraffeSpotter, Whiskerbook, etc.); have fully-	com/	Charry	Montreal	Canada	software AI/ML camera trap citizen science data analysis/viz data management images marine/aquatic open-source python terrestrial software
Organization Organization	Wild Me Wild Spotter	configured, public Docker images citizen science project engaging the public to help find, map & prevent invasive species in America's wild places; has mobile app; tools to id invasive plants, animals & pathogens	https://wildme.org/	US Forest Service, Wildlife Forever, Univ of Georgia	Portland, Oregon Georgia	USA	video citizen science data management education images marine/aquatic mobile app software terrestrial
Organization	Wildbyte Technologies	telemetry hardware maker; make Daily Diary Tags (accelerometer + magnetometer + temperature/pressure/depth/light); 2-3g; have motion visualization software (OpenCV, OpenGL) that calculates different metrics, has behavioral builder for annotating behaviors in motion data;	http://www. wildbytetechnologies. com/	Swansea University	Swansea	UK	data-/bio-logging data analysis/viz data management GPS marine/aquatic terrestrial tracking/telemetry
Organization	WildCount Australia	uses motion-sensitive digital cameras at 200 sites in eastern New South Wales to track changes in wildlife over 10 years; aim to detect change in target wildlife populations significant enough to trigger listing change on the IUCN RedList	https://www.environment. nsw.gov. au/topics/animals-and- plants/surveys- monitoring-and- records/native-animal- monitoring	New South Wales government	New South Wales	Australia	camera trap data analysis/viz hardware images terrestrial video
Organization	WildEye	provide Al-focused assistance to conservationists; creators of TrapTagger & Elephant Survey System	https: //wildeyeconservation. org/about/	Paul Maritz		South Africa	AI/ML camera traps geospatial images local capacity building mobile app software terrestrial
Organization	WildHealthNet	supports the development of national wildlife health surveillance systems, incorporating community building, skill building, technology & local response to threats	https: //oneworldonehealth.wcs. org/Initiatives/WildHealth Net.aspx	Wildlife Conservation Society	Bronx, New York	USA	Al/ML data-/bio-logging data management eDNA/genetics education local capacity building networking open-source

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Organization	Wildlife Protection Solutions	makers of wpsWatch - mobile & desktop app that provides 24/7 wildlife monitoring wildlife reserves using custom camera traps & software which can detect threats; wpsArchive - data management system; wpsPortal - info database; wpsApps - free monitoring & education mobile apps	https: //wildlifeprotectionsolutions.org/		Denver, Colorado	USA	camera trap data management education mobile app software tracking/telemetry wildlife crime prevention
Organization	Wildlife tracks (seaturtle.org)	wildlife tracking data visualization tool for marine birds/waterfowl, sea turtles, sharks & marine mammals	http://www.seaturtle. org/tracking/	seaturtle.org			data analysis/viz education geospatial GPS marine/aquatic tracking/telemetry
Organization	Wildlife.ai	developing ML solutions for conservation; projects include pattern recognition software to individually identify frogs, identify fish species; make smart trail cam for ground-dwelling animals (Weta Watcher) with edge computing to ID animals	http://wildlife.ai/		New Plymouth	New Zealand	AI/ML education images IoT marine/aquatic open-source software video
		developing a fast, low-cost & accessible species detection kit for combatting illegal wildlife trade, doing environmental impact					eDNA/genetics hardware
Organization	WildTech DNA	assessments, etc	https://wildtechdna.com/	Natalie, James, Keith	Ontario	Canada	wildlife crime prevention
Organization	WildTechDNA	developing fast, portable, low-cost & accessible species detection DNA kit	https://wildtechdna.com/	Natalie, James, Keith			eDNA/genetics hardware
Organization	WildTrack	FIT (footprint identification technique), develop algorithms to ID footprints for non-invasive monitoring of endangered species; integration with iNaturalist	https://wildtrack.org/	Zoe Jewell, Sky Alibhai			Al/ML data management images software tracking/telemetry
Organization	Xylo Systems	cloud-based software to plan & track conservation projects with automated Al data processing, insights, reports; maintains online collaboration network; compare impact to international/national benchmarks	https://www.xylosystems.	Camille Goldstone-Henry		Australia	Al/ML data management networking software
	13S: Interactive Individual	free computer-aided photo-id app that uses natural marks to		Jurgen den Hartog, Renate		Addulla	Al/ML data analysis/viz images marine/aquatic open-source
Tool	AcceleRater	web application for supervised learning of behavioral modes from acceleration measurements	https://reijns.com/i3s/ https://www.ncbi.nlm.nih. gov/pmc/articles/PMC43 37760/	Reijns Yehezkel Resheff, Shay Rotics, Roi Harel, Orr Spiegel, Ran Nathan			software data-/bio-logging data analysis/viz open-source python software tracking/telemetry
Tool	AIDE	Annotation Interface for Data-driven Ecology, image labeling software, detection from camera trap annotations, segmentation & classification of aerial imagery, has Detectron2 & other deep learning models built in, open model marketplace	https://github. com/microsoft/aerial_wild life_detection				AI/ML camera trap images geospatial open-source software
Tool	amt	to manage & analyze animal movement data; includes methods to calculate home ranges, track statistics (e.g. step lengths, speed, or turning angles), prepare data for fitting habitat selection analyses & simulation of space-use from fitted step-selection functions.		Johannes Signer, Brian Smith, Bjoern Reineking, Ulrike Schlaegel, John Fieberg, Josh O'Brien,			data analysis/viz open-source R/Rstudio software tracking/telemetry
Tool	Animal Scanner	software for classifying humans, animals, & empty frames in camera trap images	https://doi.org/10. 1002/ece3.4747	Hayder Yousif			camera trap data management images software
Tool	Animal Tracker app	allows the public to follow movements of animals being tracked by GPS using live feeds in Movebank; project owners can privately or publicly share data; users can contribute info/photos for citizen science	https://www.movebank. org/cms/movebank- content/animal-tracker	Movebank			citizen science data analysis/viz education GPS mobile app networking open-source tracking/telemetry

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Tool	artemis	aids in design & analysis of environmental DNA (eDNA) data by offering a custom suite of Bayesian latent-variable, truncated data models for quantitative polymerase chain reaction (qPCR) data from extracted eDNA samples; models fit using Stan	https://fishsciences. github.io/artemis/index. html	Matt Espe, Myfanwy Johnston			data analysis/viz eDNA/genetics open-source R/Rstudio software
Tool	ascr	fits spatial capture-recapture (SCR) models to estimate animal density from acoustic surveys	https://github.com/b- steve/ascr	Ben Stevenson			bioacoustics data analysis/viz open-source R/Rstudio software
Tool	ASMSpotter	tool to automatically detect artisanal mining activity in the Amazon using artificial intelligence/deep learning & public data from Sentinel-2 satellites	https://dida. do/asmspotter-demo	Matthias Werner, Robert Heesen, William Clemens (Dida); Adam Rolfe, Victoria Gronwald (Levin Sources); Justus Freer (RWTH Aachen University)			AI/ML data analysis/viz geospatial remote sensing terrestrial wildlife crime prevention
Tool	Australian Animal Acoustic Telemetry Database	national, centralized passive acoustic telemetry repository (data from underwater hydrophones 2007-present), >1000 active receivers, 9800 tagged animals	https://animaltracking. aodn.org.au/	Integrated Marine Observing System (IMOS)		Australia	bioacoustics data-/bio-logging data management GPS marine/aquatic open-source tracking/telemetry
Tool	Auto Arborist dataset	multi-view, fine-grained visual categorization dataset with >2 million trees (300+ genus-level categories in 23 cities across US, Canada) built to foster development of robust methods for large-scale urban forest monitoring	https://google.github.io/auto-arborist/	Sara Beery, Guanhang Wu, Trevor Edwards, Filip Pavetic, Bo Majewski, Shreyasee Mukherjee, Stanley Chan, John Morgan, Vivek Rathod, Jonathan Huang			AI/ML data management geospatial GPS images open-source remote sensing terrestrial
Tool	Autonomous Camera for Kraken Baiting and Recording (ACKBAR)	deep-sea camera trap that can generate virtual reality (VR) content		KOLOSSAL, SubC Imaging, Global Ocean Design			camera trap drones/AUV's hardware images marine/aquatic
Tool	awesome-forests	curated list of ground-truth/validation/in situ forest datasets for the forest-interested machine learning community; list targets databased biodiversity, carbon, wildfire, ecosystem service, you name itl analysis	https://github. com/blutiens/awesome- forests	Björn Lütjens			Al/ML data management education geospatial images open-source remote sensing terrestrial
Tool	Bee Living Sensor	camera system with environmental sensors for monitoring bee colonies; uses AI to annotate video, evaluate pollen loads	https://en. beelivingsensor.org/	Daniel Boschung, Clemens Mader	Zurich	Switzerland	Al/ML images software terrestrial video
Tool	Biome	citizen science app for crowdsourcing nature observations	https://earthshot.	Earthshot Labs			climate citizen science data-/bio-logging mobile app terrestrial
Tool	Biosounds	web application for ecoacoustics that archives & organizes soundscape collections, hosts reference recording collections, generates navigable sound spectrograms & allows annotation of animal vocalizations or other sounds; has user guide	https://github.	Noemi Perez & Kevin Darras, University of Goettingen			bioacoustics data analysis/viz data management open-source software
Tool	Bird Sounds Global	web portal that aims to produce training & testing material for machine learning induced automated bird species recognition using citizen science & expert validations		LIFEPLAN (University of Helsinki)			bioacoustics citizen science data analysis/viz software terrestrial
Tool	BirdNet	"shazam" for birds; recognizing birds by sound at scale; supports various hardware (Arduino, RasPi, web, smartphones, cloud); citizen science platform + analysis software for very large audio datasets; currently feature 1000 common species in N. America & Europe	https://birdnet.cornell.	Stefan Kahl (Cornell Lab of Ornithology)			bioacoustics citizen science data analysis/viz data management hardware software terrestrial

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Tool	BirdScan	compact radar/bio-monitoring system that measures bird & bat movement using a rotating horn antenna; offers real-time classification & quantification represented as mean traffic rate	https://www.swiss- birdradar.com/birdscan- mr.html	Swiss BirdRadar			Al/ML data-/bio-logging data analysis/viz geospatial hardware remote sensing terrestrial tracking/telemetry
Tool	BirdVox	aims to investigate ML techniques for automatic detection & classification of bird species from their vocalizations; code on Github; ultimate goal to deploy a network of acoustic sensors for real-time monitoring of bird migratory patterns	https://wp.nyu.edu/birdvox/	Cornell Lab of Ornithology, NYU Music & Audio Lab		USA	Al/ML bioacoustics education open-source software terrestrial
Tool	Brackish dataset	bounding box annotated underwater image dataset from 89 videos & 6 classes of marine organisms	https://www.kaggle. com/datasets/aalborguni versity/brackish-dataset	Mathias Gudiksen, Lasse Hansen	Aalborg	Denmark	camera traps images mobile app open-source video
Tool	Bristlemouth	open connectivity standard that provides plug-and-play functionality for all marine sensing systems	https://www.bristlemouth.	Office of Naval Research, DARPA, Sofar Ocean, Oceankind	San Francisco, California	USA	data-/bio-logging hardware loT
Tool	BTO Acoustic Pipeline	cloud pipeline to allow audio recordings to be uploaded to a remote server & processed to find & identify biological sounds, & return results back to your computer. Can identify 24 species of bats, 13 small mammal species, & 11 bush-cricket species.	https://app.bto. org/acoustic- pipeline/public/login.jsp	British Trust for Ornithology	Norfolk, England	UK	Al/ML bioacoustics data management software terrestrial
Tool	Bumblee Radar	low-power, mote-scale pulsed dopplar radar sensor board from Samraksh's suite of wireless sensor networks; \$100-\$400	https://samraksh. com/index. php/products/sensors/32- product-pages/products- sensors/71-bumblebee- radar	Samraksh Company			data-/bio-logging geospatial hardware IoT remote sensing
Tool	camtrapR	package for camera trap data management in R; assists in image organization, species & individual identification, data extraction from images, tabulation & visualization of results & export of data for subsequent analyses	https://github. com/iniedballa/camtrapR	Jürgen Niedballa, Rahel Sollmann, Alexandre Courtiol, Andreas Wilting			camera traps data analysis/viz open-source R/Rstudio software
Tool	Carnivore Spotter	check with your local zoo or for wildlife maps in your local area to see if there are existing resources where you can help label images or upload your own wildlife sightings	https://carnivorespotter.	Woodland Park Zoo	Seattle, Washington	USA	citizen science education images software terrestrial video
Tool	Chhimeki Chara	app to help people identify & count birds you see & hear in your neighborhood; made for Nepalese Neighborhood Bird Counts	https://play.google. com/store/apps/details? id=com. chhimekicharaapp	Bird Conservation Nepal	•	Nepal	citizen science education images mobile app
Tool	CITES Wildlife TradeView	interactive online tool for exploring & visualizing CITES trade data over time, by species or by country; to visualize trends in international wildlife trade	https://tradeview.cites.	CITES, United Nations Environment Programme		Пори	data analysis/viz software wildlife crime prevention
	Cloud for Sustainability	combines tools to help companies track emissions, environmental	https://www.microsoft.com/en-us/sustainability				consulting climate software
Tool	Congo Basin Community Atlas	providing easy access to accurate geographical info on community presence, posession & use in the Congo	https://cbca. mappingforrights.org/	Mapping for Rights, indigenous communities, Rainforest Foundation UK	countries of Congo Basin	Africa	data management geospatial GPS local capacity building open-source software
Tool	conservationist.io	apps platform (Collaborative Mapper to edit maps within a team, Habitat Patrol to detect landscape cover changes), in beta testing now	https://conservationist.	Defenders of Wildlife	Secretarion of Gorigo Busin		geospatial mobile app remote sensing software
Tool	Coral Reef Mapping Robot	"Scoutbot" is a semi-autonomous boat used to map shallow coral reefs & monitor marine protected areas; has remote control capacity & route planning with GPS; incorporates AI models to identify corals	https://cesarjungharada.com/cjh/coral-reef-mapping-robot				Al/ML drones/AUV's GPS hardware images marine/aquatic

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ΓοοΙ	CoralNet	open-source data repository & collaboration/data-sharing platform for benthic images analysis; site deploys deep neural networks for full & semi-automated image annotation; can have public or private datasets saved	https://coralnet.ucsd.edu/about/	Oscar Beijbom, Stephen Chan, Devang Sampat			Al/ML data analysis/viz data management geospatial images marine/aquatic open-source remote sensing software
Tool	crawl	fit continuous-time correlated random walk models with time indexed covariates to animal telemetry data; model fit using the Kalman-filter on a state space version of the continuous-time stochastic movement process	https://cran.r-project. org/web/packages/crawl/index.html				data analysis/viz open-source R/Rstudio software tracking/telemetry
Tool	ctmm	R package for analyzing animal tracking data as continuous-time stochastic processes; features include FFT variogram & Lomb-Scargle periodogram analysis, perturbative REML estimation, Kriging, simulation, & autocorrelated kernel-density home-range estimation	https://biology.umd. edu/movement	Christen Fleming, Justin Calabrese			data analysis/viz open-source R/Rstudio software tracking/telemetry
Tool	CyberTracker	app for GPS field data collection, with icon user interface design, integration with ArcGIS, SMART, EarthRanger, GDM+; can customize based on your sampling scheme; developing a worldwide environmental monitoring network	https://www.cybertracker.org/	Louis Liebenberg, Justin Steventon	Cape Town	South Africa	GPS mobile app software tracking
Tool	DeepLabCut	toolbox for marker-less pose estimation of of user-defined features with deep learning for all animals including humans, performing various tasks	https://github. com/DeepLabCut/DeepL abCut	Alexander Mathis, Mackenzie Mathis, Jesse Lauer, Tanmay Nath,			data analysis/viz open-source python software video
Tool	DeepMeerkat	tool for background subtraction & image classification for stationary cameras in ecological videos using machine learning models	http://benweinstein.	Ben Weinstein			AI/ML camera traps data analysis/viz images open-source software video
Tool	Digilkom	and acure platform for photo management 9 storage	https://www.digikam.org/	Gilles Caulier, Maik Qualmann, Marcel Wiesweg, Mario Frank, Simon Frei			camera trap data management images
Tool	Digikam Diopsis	open-source platform for photo management & storage camera trap set-up designed for insects; has 4G connectability & solar-powered; COSMONiO deep learning software id's insect taxa & draws bounding boxes in images; can estimate insect weight		Naturalis Center		the Netherlands	open-source camera trap data analysis/viz hardware images software terrestrial video
Tool	DynAlkonTrap	Al-enabled camera trap design targeted at Raspberry Pi platform; analyzes continuous stream from camera attached to Raspberry Pi to detect animals, so system doesn't rely on secondary sensors like PIR					camera trap data analysis/viz education hardware images open-source terrestrial video
		planetary data visualizer with near-real-time data, has climate alerts (fires, coral reef bleaching, etc.); combines scientific data & engaging visualization techniques with storytelling power of		Global Commons Alliance, Mongabay, nullschool.earth,			climate data analysis/viz education geospatial
Tool	Earth HQ eBird	environmental news media citizen science mobile app to track your bird lists & photos, ID sightings; data document bird distribution, abundance, habitat use, trends through checklist data	https://earthhq.org/	World Resources Institute Cornell Lab of Ornithology	Ithaca, New York	USA	software academic lab bioacoustics citizen science data analysis/viz data management education images mobile app networking video

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Taal	Fabida	terrestrial lidar instrument (from CSIRO) allows rapid acquisition of vegetation structure data that can be integrated with airborne &	https://www.umb. edu/spectralmass/lidar/ev	U.Mananahurana	Danter Massachusette	UGA	data analysis/viz geospatial hardware remote sensing terrestrial
Tool	Echidna	spaceborne lidar to create 3-D reconstructions no-code interface for using the MegaDetector ML model to analyze	https://github.com/PetervanLunteren/E	U Massachusetts	Boston, Massachusetts	USA	tracking/telemetry AI/ML camera traps data analysis/viz images open-source software
Tool	EcoAssist	camera trap images repository of environmental audio recordings; facilitates management, access, visualization & analysis of environmental acoustic data; uses Acoustic Workbench software open source on	https://www.ecosounds.	Peter van Lunteren			terrestrial bioacoustics data analysis/viz data management
Tool	Ecosounds	GitHub	org/	QUT Ecoacoustics Group	Queensland	Australia	software citizen science data-/bio-logging education geospatial images
Tool	EDD MapS (Early Detection and Distribution Mapping System)	web-based mapping system for documenting invasive species & pest distribution; maximize the effectiveness & accessibility of invasive species observations recorded	https://www.eddmaps. org/	Center for Invasive Species and Ecosystem Health @ University of Georgia	Georgia	USA	local capacity building software terrestrial
Tool	eDNA R Shiny app	for modeling eDNA scores (number of positive qPCR replicates); accounts for probabilities of false positive & false negative errors in field & lab when estimating probability of species presence using single-species eDNA data; model fitted using Bayesian approach	https://blogs.kent.ac. uk/edna/	Alex Diana, Jim Griffin, Eleni Matechou, Richard Griffiths, Dimitrios Bormpoudakis, Andrew Buxton,			data analysis/viz eDNA/genetics open-source R/Rstudio software
Tool	Elephant Survey System (ESS)	suite of open-source software & hardware that can be used to reduce the manual effort & resources involved in aerial surveys of elephants	https: //wildeyeconservation. org/elephant-survey- system/	WildEye & Innoventix		South Africa	Al/ML data analysis/viz data management geospatial hardware images open-source remote sensing software terrestrial
Tool	Elephant Tracking & Geofencing	elephant tracking collars for real-time GPS locations to avoid elephant-human conflict; alert system when data abnormal (potential poaching event); have geofences set up that ping locals/stakeholders when an elephant passes the fence	https://www. savetheelephants. org/project/tracking-real- time-monitoring-app/, AND https://www. savetheelephants. org/project/geo-fencing/	Save the Elephants			data-/bio-logging GPS hardware local capacity building terrestrial tracking/telemetry wildlife crime prevention
Tool	eMammal	data management system & archive for camera trap research projects; citizen scientists aid scientists in photo collection; 110 projects from 22 countries; eMammal Lite is animal ID game	https://emammal.si.edu/	Smithsonian	Washington DC	USA	camera trap citizen science data management education images mobile app software video
Tool	ESRI Elephant Detection Package	deep learning model to detect elephants in aerial imagery trained on 2019 Aerial Elephant Dataset	https://www.arcgis. com/home/item.html? id=4976292298c440e686 aa339e52da2dbb	ESRI Analytics Team	Redlands, California	United States	Al/ML geospatial images open-source python remote sensing terrestrial

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Tool	Furopean Biodiversity Portal	offers access to biodiversity observations & ecological data (& essential biodiversity variables), statistics, & analyses of changes over time, along with tools for sharing or discovering data & products generated by scientific & analytical processes; aquamaps, citizen science projects, species distribution models	http://biodiversity.eubon.eu/home	EU BON			citizen science data-/bio-logging data analysis/viz data management education geospatial GPS images marine/aquatic networking open-source remote sensing software terrestrial tracking/telemetry
Tool	FathomNet	open-source image database that can be used to train, test & validate state-of-the-art artificial intelligence algorithms to help us underst& our ocean & its inhabitants	http://fathomnet.	Kakani Katija, Ben Woodward, Grace Young, Gilbert Montague, Genevieve Flaspohler, Joshua Gyllinsky	Moss Landing, California	USA	AI/ML data analysis/viz data management education images marine/aquatic open-source
Tool	Fin Finder	Al tool to identify shark or ray species when users upload a photo of a fin; app analyzes the shape and patterns on the fin.	https://www.straitstimes.com/singapore/environment/new-app-launched-to-help-in-fight-against-illegal-trade-of-shark-and-ray-fins	The National Parks Board, Conservation International, Microsoft Singapore	·	Singapore	Al/ML data-/bio-logging data analysis/viz images local capacity building marine/aquatic mobile app
1001	riii Filidei	movement ecology & bio-logging software that has functions for GPS annotations, interpreting accelerometer data, visualize animal tracks; can work offline; integrated with Movebank, different sensor	https://www. schaeuffelhut-berger. de/wordpress/en/services /products/products-	•		Siligapore	data-/bio-logging data analysis/viz data management GPS software
Tool	Fisheries Analytical Capacity Tool	types/manufacturers fisheries intelligence management & analytical system; capturing & analysing the identities & characteristics of the global fishing fleet & the companies that operate it; looking at vessel movements,	firetail-eng/ https://www.tm-tracking.org/our-tools	Software Engineering Trygg Mat Tracking	Unterhaching, Bavaria Oslo (HQ)	Germany Norway (HQ)	tracking/telemetry AI/ML data analysis/viz data management GPS marine/aquatic remote sensing software
Tool	Fishnet.ai	Al training data for fisheries, from boats carrying electronic monitoring systems, creating open library of training data to accelerate implementation of Al in fisheries	https://www.fishnet.ai/	The Nature Conservancy Audrey Looby, Amalis Riera,	555 (114)	Tomay (Ta)	Al/ML data analysis/viz marine/aquatic
Tool	FishSounds	comprehensive, global inventory of fish sound production research as well as recordings library that includes 1100+ species observed	https://fishsounds. net/index.js	Sarah Vela, Kieran Cox, Santiago Bravo, Rodney Rountree, Francis Juanes, Laura K. Reynolds, Charles W. Martin, University of Victoria, University of Florida, Universidade de Sao Paulo, Meridian, FishBase			bioacoustics data management marine/aquatic open-source software
Tool	FlightR	R package to position animals with solar geolocation archival tags	https://github.com/eldarrak/FLightR	Eldar Rakhimberdiev, Julia Karagicheva, Jordan Biserkov, Auriel Fournier			data-/bio-logging data analysis/viz open-source R/Rstudio software tracking/telemetry
Tool	Flora Incognita	take of picture of a plant & upload, app uses AI to ID the plant (currently for >4800 species); links to plant fact sheets; people can save observations for citizen-science based research	https://floraincognita.	Patrick Mäder, Jana Wäldchen			Al/ML citizen science mobile app terrestrial
Tool	FlukeBook's Tweet-a-Whale project	take a picture of a whale in the wild & tweet it to @tweetawhale, they'll help you identify it; works for 8 whale species	https://www.flukebook.	WildMe			AI/ML citizen science data analysis/viz education images

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Tool	Force for Nature Ranger app	designed by rangers, for rangers to share knowledge, channel resources, improve support, connect with the community	https://www. forcefornature. org/rangers	Jamie McCallum (Peace Parks)	London	UK	education local capacity building mobile app networking wildlife crime prevention
Tool	Forest Inspector	map-based presentation of timber transports in real-time with transparency on forest management plans & harvest authorizations; users can report illegal activity & trucks/companies not listed, https://eia-global.org/videos/20200428-how-to-use-forest-inspector	https://inspectorulpadurii.	Romanian government		Romania	citizen science data analysis/viz education GPS mobile app wildlife crime prevention
1001	Porest inspector	iPhone/iPad application that allows LiDAR-based tree	IU/#/	Romanian government		Romania	data analysis/viz GPS images mobile app
Tool	Forest Scanner app	measurement; diameter at breast height error within 2cm; record GPS coordinates; Android app under development	https://forest-scanner.	Mapry, Inc.	Tamba-shi, Hyogo-ken	Japan	remote sensing terrestrial
Tool	Forest Watcher	brings online forest monitoring & alert systems of Global Forest Watch offline & into the field to monitor areas of interest, view deforestation & fire alerts, navigate to a point & collect info, regardless of connectivity	https://forestwatcher. globalforestwatch.org/	Global Forest Watch/WRI			data analysis/viz geospatial local capacity building mobile app remote sensing software
Tool	FOSSA (Free and Open Source Software for Acoustics)	streamlined approach to analyzing passive acoustic data, including species classification; Two packages: PAMpal (incorporates acoustic detections generated in PAMGuard with visual survey data), BANTER (event-based classification)	https://www.fisheries. noaa.gov/west- coast/science-data/fossa	NOAA Southwest Acoustic Ecology Lab	La Jolla, California	USA	AI/ML bioacoustics citizen science data analysis/viz images marine/aquatic open-source software
	GDL2/GDL3	miniaturized geolocator tracker; 0.5g device for exclusive recording of positioning data & 1.3g device with additional sensors for	https://www.vogelwarte. ch/en/projects/bird- migration/tracking- devices-miniaturized-	Swiss Ornithological Institute & Bern Univ of	Ed Solid, Salifornia	OSA	data-/bio-logging GPS hardware terrestrial
Tool		temperature, air pressure, acceleration, etc. Earth-imaging satellite; revisits any point on Earth at least once	https://earth.esa. int/eogateway/missions/g	Applied Sciences			tracking/telemetry geospatial hardware
Tool	GeoEye	every 3 days R package for classification, detection & visualization of acoustic signals using machine learning; makes commonly used signal processing techniques & various machine learning algorithms	https://github.com/DenaJGibbon/gibbo	DigitalGlobe		USA	remote sensing bioacoustics data analysis/viz open-source R/Rstudio
Tool	gibbonR	readily available via R central public database of illegal wildlife & timber activity (pulls from		Dena Clink, Holger Klinck			software data management education local capacity building open-source
Tool	Global Environmental Crime Tracker	publicly available info, media coverage); currently for Asia, Africa & Europe combines multi-petabyte catalog of satellite imagery & geospatial datasets with planetary-scale analysis capabilities & makes it available to anyone; tools include: timelapses, ready-to-use datasets, API in Python & Java, web-based code editor, all on Google's cloud computing platform	org/global-environmental- crime-tracker/ https://earthengine.google.com/	Agency			terrestrial wildlife crime prevention AI/ML climate data analysis/viz data management geospatial GPS marine/aquatic python remote sensing software
	Google Earth Engine	Gr& Unified Acoustic Notation Ontology for Bats; universal, open		Google			terrestrial bioacoustics data management open-source
Tool	GUANO	open source plug-and-play solution for those who want to develop their own custom telemtery solutions; used to track plastic waste; developer kit includes GPS, bluetooth, 9-axis accelerometer, 3G cellular & Argos Arctic transmitter; can configure/modify settings using Python tools over USB or bluetooth	https://guano-md.org/ https://arribada. org/horizon/	Arribada Initiative			terrestrial data-/bio-logging data management GPS hardware open-source python tracking/telemetry

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Tool	Hotspot Chiangrai	pulls hotspot data from the NASA's MODIS satellite-based sensor to visualize, in near real time, fire hotspot locations; sends alerts to firefighters & communities and plots shortest path to fire, details admin boundaries	https://play.google. com/store/apps/details? id=com.geolabth. hotspot_chiangrai&hl=en &ql=US	Nion Sirimongkonlertkul	Chiang Rai	Thailand	citizen science GPS local capacity building mobile app remote sensing terrestrial
	The state of the s	mobile app for anyone to use to report where ivory is being illicitly sold; reports & images submitted may be reported to wildlife	https://apps.apple. com/us/app/i-of-the-	g and a	January I.		citizen science mobile app software
Tool	i of the Elephant	authorities for investigation	elephant/id1330680069 https://www. maximintegrated.	Biologists without Borders	San Rafael, California	USA	wildlife crime prevention
Tool	iButton	dataloggers (\$20-\$100); small, low-cost sensor that can log temp/humidity in field for long-term deployments	com/en/products/ibutton- one-wire/ibutton.html	Maxim Integrated	San Jose, California	USA	data-/bio-logging hardware
Tool	IDtrees	machine learning ready datasets for tree detection & species classification. Benchmark dataset on tree detection: https://github.com/weecology/NeonTreeEvaluation & a past data science competition: https://idtrees.org/competition/	https://idtrees.org/	Weecology Lab - University of Florida	Florida	USA	academic lab AI/ML data analysis/viz geospatial open-source terrestrial
Tool	iNaturalist	citizen science app to record wildlife sighting observations, share with other users, discuss findings; data shared with GBIF to help scientists use the data: runs bioblitz eventzs	https://www.inaturalist.	National Geographic, California Academy of Sciences			bioacoustics citizen science data management education events images mobile app networking video
Tool	Instant Detect	threat monitoring system combining low power sensors, camera traps & acoustic sensors to detect humans & wildlife; data sent in real-time via satellite to online data management tool; early warning system of illegal activity like packing	https://www.zsl. org/conservation/how-	Zoological Society London (ZSL)	London	UK	bioacoustics camera trap data analysis/viz data management hardware images loT remote sensing software video wildlife crime prevention
Tool	INSTINCT	automatic event detection framework for passive acoustic archival data	https://github. com/DanWoodrich/INSTI NCT	Daniel Woodrich (NOAA)			Al/ML bioacoustics data analysis/viz marine/aquatic open-source software
Tool	Integrated Biodiversity Assessment Tool	host & maintain IUCN Red List, Protected Planet database on Protected Areas, World Database of Key Biodiverity Areas; authoritative biodiversity data for decision-making	https://www.ibat-alliance.	UNEP WCMC, IUCN, Conservational International, BirdLife International			consulting data management education geospatial
Tool	Investeggator	artificial sea turtle eggs that house GSM-GPS tracking devices; placed in nests that are at high risk to poaching; after eggs extracted from a nest, their movements will be monitored & mapped to combat illegal egg trade		Paso Pacifico			data-/bio-logging GPS hardware remote sensing tracking/telemetry wildlife crime prevention
		tool for flexible spatial & temporal analyses of observed & project climate change info from IPCC 6th assessment, including regional	https://interactive-atlas.				climate consulting
Tool	IPCC Interactive Atlas	synthesis for climatic impact-drivers bioacoustic analysis software, \$200/year; has built in cluster	ipcc.ch/ https://www. wildlifeacoustics. com/products/kaleidosco	IPCC Wildlife Acoustics			data analysis/viz bioacoustics data analysis/viz
Tool	KiloCam	analysis, SPL analysis, ecoacoustic indix calculations tools low-cost time-lapse camera designed to make habitat monitoring more accessible; fits inside GoPro or third-party housings for easy waterproof deployment	https://www. ecologisconsulting. com/products/p/kilocam- pcb-v10	Wildlife Acoustics EcoLogis	Honolulu, Hawaii	United States	software camera traps data-/bio-logging hardware images marine/aquatic terrestrial

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		python package for developing & using machine learning solutions	https://pypi.				Al/ML bioacoustics data analysis/viz data management python
Fool .	Koogu	in animal bioacoustics autonomous mobile biotelemetry sensor that combines edge computing with wireless sensing of in vivo physiological, behavioral	org/project/koogu/ https://www.pnnl. gov/available-	Shyam Madhusudhana	Ithaca, New York	USA	software data-/bio-logging hardware
ГооІ	Lab-on-a-Fish	& environmental variables; capable of transmitting raw data in real time & storing on-board; can provide 3-D locations of tagged animal	technologies/lab-on-a-	Pacific Northwest National Lab	Richland, Washington	USA	marine/aquatic tracking/telemetry
Tool	LandPKS	L& Potential Knowledge System (PKS); free mobile app for anyone to monitor their l& over time; tracks soil health, vegetation cover, l& management, etc.; can collect, share & analyze site-specific data; also has desktop data portal	https://landpotential.org/	USAID			climate citizen science data-/bio-logging data management local capacity building mobile app open-source software
Tool	LILA BC	Labeled Information Library of Alexandria: Biology & Conservation (LILA BC); repository for data sets related to biology & conservation; hosts labeled/annotated training & test datasets, mostly images but some acoustic datasets as well	https://lila.science/	Zooniverse, Evolving Al Lab, Snapshot Safari, Microsoft Al for Earth, Univ of Minnesota			AI/ML bioacoustics data management images marine/aquatic open-source terrestrial video
Tool	Macaulay library	wildlife media archive for photos, videos & audio; data available for research, educational & commerical use; individuals can contribute their media to the archive; integrated with eBird	https://www. macaulaylibrary.org/	Cornell Lab of Ornithology			bioacoustics data managament images marine/aquatic software terrestrial video
Tool	Manta ID	underwater camera trap for identifying manta rays; Arduino-based; currently not in development?	https://ando. xyz/work/manta-id	Ando Shah, Daan van Duinkerken			camera traps hardware images marine/aquatic
Tool	Mapbox	app with real-time map visualizations, turn-by-turn routing, studio to design your own custom maps, data dashboard, movement data, etc.	https://www.mapbox.				data analysis/viz geospatial mobile app
Tool	Mapeo	free digital toolset for documenting, monitoring & mapping different types of geospatial & observational data; offline functionality, open source, mobile app; used by many Indigenous groups	https://www.digital- democracy.org/mapeo/	Digital Democracy			citizen science geospatial GPS local capacity building mobile app open-source software
Tool	Mataki	GPS tracking system; tag device (10g or 3g option) with unique ID# attached to animal & tracking info collected by tags sent to base station over radio link; data uploaded from base station to PC		Debug Innovations Ltd.			geospatial GPS hardware remote sensing terrestrial tracking/telemetry
Tool	Megadetector	image detection software for processing camera trap data; can detect animals, people & vehicles; integration with TimeLapse, eMammal, digiKam; cloud computing (Azure); can be packaged into API's for real-time detection	https://github. com/microsoft/CameraTr aps/blob/master/megadet ector.md	Sara Beery, Microsoft AI for Earth			AI/ML camera trap data analysis/viz data management images python software
Tool	Merlin Sound ID	listens to birds & shows real-time suggestions for species singing; can compare your recordings to calls in Merlin to confirm what you heard	https://merlin. allaboutbirds.org/sound- id/	Cornell Lab of Ornithology			bioacoustics citizen science software mobile app
Tool	MERMAID	Marine Ecological Research Management AID; online/offline platform that allows scientists anywhere in the world to collect, analyze & share field-based coral reef surveys	https://dashboard.datamermaid.org/	WCS, WWF, Sparkgeo			AI/ML camera trap data analysis/viz data management images software

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Tool	MLWIC2	can be used to automatically classify camera trap images or to train new models for image classification; contains two pre-trained models: one identifies 58 species & empty images & the one distinguishes between images with animals & those that are empty; also contains Shiny apps for running the functions	https://github. com/mikeyEcology/MLWI C2	Michael Tabak, et al.			data analysis/viz images open-source python R/Rstudio software
Tool	momentuHMM	R package for analysis of telemetry data using generalized multivariate hidden Markov models of animal movement	https://cran.r-project. org/web/packages/mome ntuHMM/vignettes/mome ntuHMM.pdf	·			open-source R/Rstudio software tracking/telemetry
Tool	monitoR	acoustic template detection & monitoring database interface; create, modify, save, & use templates for detection of animal vocalizations; upload a MySQL schema, manage survey metadata, write & read templates & detections locally or to database	https://cran.r-project. org/web/packages/monit oR/index.html	Sasha Hafner, Jon Katz			bioacoustics data analysis/viz open-source R/Rstudio software
Tool	move	contains functions to access movement data stored in movebank. org, tools to visualize & statistically analyze animal movement data, calculate dynamic Brownian Bridge Movement Models, to address movement ecology questions	https://cran.r-project. org/web/packages/move/index.html				data-/bio-logging data analysis/viz open-source R/Rstudio software tracking/telemetry
		no-code analysis platform for animal tracking data using data from Movebank or cloud storage; can build, share & publish analysis	https://www.moveapps.	Max Planck Institute of			data analysis/viz data management GPS networking open-source
Tool	MoveApps Movebank	free, online database of animal tracking; to manage, share, protect, analyze & archive wildlife tracking data; can explore open data with visualization tool; has data on >1000 species, billions of location points	https://www.movebank.org/cms/movebank-main	Animal Behavior Max Plank Institute of Animal Behavior			tracking/telemetry AI/ML camera trap data analysis/viz data management geospatial open-source software remote sensing
Tool	moveHMM	provides tools for animal movement modeling using hidden Markov models; includes processing of tracking data, fitting hidden Markov models to movement data, visualization of data & fitted model & decoding of the state process	https://cran.r-project. org/web/packages/move HMM/index.html	Theo Michelot, Roland Langrock, Toby Patterson, Brett McClintock, Eric Rexstad			data analysis/viz open-source R/Rstudio software tracking/telemetry
Tool	moveVis	provides tools to visualize movement data (e.g. from GPS tracking) & temporal changes of environmental data (e.g. from remote sensing) by creating video animations	http://movevis.org/index.	Jakob Schwalb-Willmann			data analysis/viz open-source R/Rstudio software tracking/telemetry
Tool	MovingPandas	Python library for handling movement data; provides trajectory data structures & functions for movement data exploration & analysis	https://anitagraser.github.io/movingpandas/	Anita Graser			data analysis/viz open-source python software tracking/telemetry
Tool	MSTrIPES	a platform to assist effective patrolling, assess ecological status & mitigate human-wildlife conflict in & around tiger reserves	https://ntca.gov.in/our- work-m-stripes/#m- stripes	National Tiger Conservation Authority			data-/bio-logging data analysis/viz data management geospatial GPS images local capacity building mobile app remote sensing software terrestrial tracking/telemetry wildlife crime prevention
Tool	My Gorilla Family app	app to get all-access pass to a real mountain gorilla family, with updates from rangers, daily statuses, etc.; meant as alternative (to tourism) revenue-generating mechanism & to increase awareness, interest & direct involvement in gorilla conservation	https://gorilla.family/	The Naturalist		Uganda	education mobile app terrestrial
Tool	Name That Fish	can upload underwater videos & ML model will draw bounding boxes & classify species	https://www. namethatfish.com/	Jake Easterling of Scubotics			Al/ML images marine/aquatic software video

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Tool	Natusfera	digital citizen science platform for Europe; record plant/animal observations, connect with other users, & report invasive species	https://atlasofthefuture. org/project/natusfera/		CREAF (Barcelona), GBIF	Spain	citizen science education networking open-source software
Tool	Nocturnal Bird Migration GitLab	developing a tool to optimize the use of bioacoustics to follow birds' nocturnal migration	https://gitlab.com/nbm. challenge/nbm-nocturnal- bird-migration	Adrien Pajot, Biophonia, Natural Solutions			Al/ML bioacoustics data analysis/viz open-source terrestrial
Tool	OBIS-SEAMAP	Ocean Biodiversity Information System - Spatial Ecological Analysis of Megavertebrate Populations; center for marine mammal, seabird, sea turtle, shark & ray distributions with >7 million records from 1500+ datasets; includes individual ID datasets for cetaceans (fins) & sea turtles; marine protected area maps/modeling tools to visualize species density; publishes to GBIF	https://seamap.env.duke.edu/	Duke University			bioacoustics camera trap citizen science data-/bio-logging data management geospatial GPS images marine/aquatic open-source remote sensing tracking/telemetry
Tool	Observation	the iNaturalist of Europe (started in the Netherlands), citizen science-based global observation system with species registry		Naturalis Biodiversity Center, Natuurpunt,			bioacoustics citizen science data management education images mobile app networking software
Tool	Observation.org Open Ocean Cam	(GBIF) for data collection of validated field data from anyone underwater camera trap, 1-4 weeks battery life, 2TB storage, smartphone app, 1080p images/videos, up to 400m depth, open-source; can upload data to cloud & run Al model to classify species	https://observation.org/ https://openoceancam.com/	Natagora, Zostera			video Al/ML camera trap hardware images marine/aquatic open-source video
		free, open-source software for analysis of bioacoustic recordings; allow users to train custom species classification models & predict presence/occupanyc/etc; can be run on single computer, cluster or	http://opensoundscape.	Kitzes Lab, Univ of			bioacoustics data analysis/viz open-source
Tool	Open Soundscape	platform for crowdsourced urban tree inventory & community	org/en/latest/ https://github.	Pittsburgh Justin Walgran, Rocky Breslow, Michael Maurizi, D	Pittsburgh, Pennsylvania	USA	software citizen science data-/bio-logging education
Tool	OrcaSound	open source project building web interface for listening to orcas as they swim past different hydrophones in the Puget Sound; citizen scientists can also listen to live underwater recordings & label orca calls & other interesting sounds that they hear	https://www.orcasound.	Boyer Sound Action, Pacific Mammal Research, Center for Whale Research, Whale Trail, FOLKS, Oceans Initiative, Whale Scout, Cetacean Research Tech, Orca Behavior Institute & others			bioacoustics citizen science data management marine/aquatic software tracking/telemetry
Tool	PAMGuard	open-source PAM software based on platform-independent, flexible, modular architecture; extensive documentation & support for users & developers (has API); aimed at marine mammals but can be used for terrestrial; has detection models built in	https://www.pamguard.org/	Heriot-Watt Univ, Ecologic, E&P Sound & Marine Life Program, Oregan State Univ, Scripps Institution of Oceanography			AI/ML bioacoustics open-source software
Tool	Pl@ntNet	identify plants from a picture; citizen science app; 28,000 species identified	https://plantnet.org/en/	Floris'Tic			citizen science educationimages images
Tool	Planetary Computer	combines multi-petabyte catalog of global environmental data with intuitive APIs & apps; has data catalog, Hub (development environment)-open-source; integrated apps - Marxan, PrevisIA, Impact Observatory's system, forest carbon tracking	https: //planetarycomputer. microsoft.com/	Microsoft			Al/ML data analysis/viz data management geospatial GPS marine/aquatic remote sensing software terrestrial

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Tool	PoacherCam	anti-poaching trail cam with motion-triggered detection system to instantly distinguish between people & animals; has invisible infrared flash, sends images & locations to law enforcement officials in real-time via wireless networks	https://www.panthera. org/conservation- technology/poachercam	Panthera			Al/ML camera trap data management images IoT video wildlife crime prevention
Tool	Project Inambari	open mapping platform using publicly available Synthetic Aperture Radar satellite imagery combined with other data streams (like drone images) for detecting tropical forest mining	https://www. artisanalminingchallenge. com/semi- finalists/project-inambari https://news.microsoft.	Bjorn Bergman, Christian Thomas, Dan Cogswell, John Amos, Alice Foster, Ryan Covington, Amy Mathews, Jorge Caballero, Miles Silman, Paúl Pauca, Sarra Alqahtani	Houston, Texas Shepherdstown, West Virginia Santa Fe, New Mexico Boston, Massachusetts Milwaukee, Wisconsin Puerto Maldonado Winston-Salem, North Carolina	USA Peru	data analysis/viz drones/AUV's geospatial local capacity building open-source remote sensing software terrestrial wildlife crime prevention
Tool	Project SEEKER	multi-species AI model to detect illegal wildlife trafficking at airports; can be installed into luggage/cargo scanners & automatically alert enforcement agencies when it detects an illegal wildlife item; 70% success rate in trials so far, particularly good for ivory products	com/en- gb/2021/11/18/first-of-its- kind-multispecies-ai- model-to-detect-illegal- wildlife-trafficking-is- ready-to-roll-out-to- airports/	Microsoft, Smiths Detection, United for Wildlife			Al/ML consulting data analysis/viz images software wildlife crime prevention
Tool	Protection Assistance for Wildlife Security (PAWS)	builds predictive models based on past poaching activity; now a feature in SMART- Predictive Patrol Planning; provides an automated approach that generates efficient & randomized patrol schedules; https://onlinelibrary.wiley.com/doi/10. 1002/9781119376866.ch10	https://github.com/lily- x/PAWS-public	Lily Xu, Milind Tambe (Harvard), Microsoft			AI/ML data-/bio-logging data analysis/viz geospatial local capacity building open-source software terrestrial wildlife crime prevention
Tool	RangerBot	autonomous underwater vehicle project focused on developing deployable robotic systems to help reef managers & other conservation groups upscale underwater monitoring of reefs; developing real-time image processing techniques	https://research.qut.edu. au/qcr/Projects/rangerbot	QUT Centre for Robotics & Great Barrier Reef Foundation			AI/ML camera trap data analysis/viz hardware images marine/aquatic
Tool	Raven (Lite, Pro)	bioacoustic analysis software; has energy-detection models built-in, great for extracting bioacoustic measurements	https://ravensoundsoftware.com/software/raven-pro/	Cornell Center for Conservation Bioacoustics	Ithaca, New York	USA	bioacoustics data analysis/viz software
		Matlab-based tool set to integrate high-performance computing (HPC) technologies and bioacoustics data-mining capabilities; hardware-independent solution/framework for processing large	https://www.birds.cornell.	Cornell Center for			bioacoustics data analysis/viz data management
Tool	Reforestation Directory	acoustic data sets global directory of reforestation & tree-planting projects is a starting point for people wanting to fund reforestation; uses 36 criteria in different categories: context, ecological, economic, social, institutional	edu/ccb/raven-x/ https://reforestation.app/	Conservation Bioacoustics	Ithaca, New York	United States	software data analysis/viz education funding geospatial
Tool	Regreening Africa App	providing evidence on where restoration is happening, methods used & who are the beneficiaries; can locate where exotic tree species are replacing indigenous species & recommends actions based on evidence	https://www. worldagroforestry. org/blog/2021/01/13/mobi le-application-helps- african-farmers-manage- and-restore-their-land		Nairobi	Kenya	climate data management geospatial local capacity building mobile app software terrestrial
Tool	RhoDIS (Rhino DNA Index System)	database that will match seized rhino horns with carcasses/reference DNA samples from national parks, reserves, game farms, zoos	https://www.wwfindia. org/news_facts/feature_s tories/rhodis_india_foren	Ŭ Ŭ	reality	South Africa	data management eDNA/genetics GPS terrestrial tracking/telemetry wildlife crime prevention
Tool	Ropeless Fisher	ropeless fishing system using pop-up buoys & acoustic sonar to transmit signal when vessel is near, triggers acoustic release mechanism so buoys/traps float to surface; offshore & coastal systems	https://www.desertstar.com/ropeless-fishing	Desert Star Systems			consulting drones/AUV's hardware marine/aquatic
Tool	scikit-maad	dedicated to the quantitative analysis of environmental audio recordings; designed to load & process digital audio, segment & find regions of interest, compute acoustic features & estimate sound pressure level; to measure acoustic properties & identify key patterns in soundscapes		Juan Sebastian Ulloa, Jérôme Sueur, Thierry			bioacoustics data analysis/viz open-source python software

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Tool	Seabird Tracking Database	largest collection/central database of seabird tracking data; can contribute your own data (has data sheet template) or request download from database; formerly 'Tracking Ocean Wanderers'	http://www. seabirdtracking.org/	BirdLife International			data management GPS marine/aquatic terrestrial tracking/telemetry
Tool	SEE Shall and	take a photo of a product you think could be illegal turtleshell & app will tell you instantly if it is or not with high degree of accuracy; contribute to studying illegal wildlife trade & identifying trade	https://www.seeturtles.	See Turtles			AI/ML citizen science images mobile app
Tool	SEE Shell app	provides facilities for estimating broad-scale animal motions from	https://github. com/SWotherspoon/SGA	See Turtles			wildlife crime prevention data analysis/viz open-source R/Rstudio software
Tool	SGAT	online real-time tracking platform for 430 tagged sharks from OCEARCH research expeditions on at-sea laboratory boat; also have mobile app (https://www.ocearch.org/app/) for tracking	https://www.ocearch.	OCEARCH, SeaWorld,			tracking/telemetry data analysis/viz education GPS marine/aquatic mobile app remote sensing software
Tool	Shark Tracker Shark Trace	individual sharks digital traceability tool that tags & tracks sharks from capture to consumption to ensure transparency through supply chain; separate pages for onboard, offloading, in-transit, processing; trialled in Australia	org/tracker/ https://www.traffic. org/sharktrace/	Chris Fischer TRAFFIC			tracking/telemetry consulting education marine/aquatic mobile app wildlife crime prevention
Tool	SnapperGPS	location data logger system designed for wildlife tracking; in development; making a simple, low-power, low-cost system that can be accessible to conservationists globally	https://twitter. com/SnapperGPS	Amanda Mattes, Jonas Beuchert, Alex Rogers		UK	data-/bio-logging GPS marine/aquatic remote sensing terrestrial tracking/telemetry
Tool	Soundclim	scripts & modules to search for soundmarks in field audio recordings	https://github.com/PEM- Humboldt/soundclim	Instituto Humboldt Colombia			bioacoustics data analysis/viz open-source python software
Tool	Species Conservation Toolkit (SCTI)	"software for saving species"; makers of Vortex (extinction risk simulator), PMx (genetic/demographic management of captive populations), Outbreak (disease outbreak simulator), RAMAS & HexSim (population viability analysis)	https://scti.tools/	Mgmt team: Jonathan Ballou, Robert Lacy, Onnie Byers, Sara Sullivan, Taylor Callicrate			data analysis/viz
Tool	Specky	spectrogram viewing Python app to label audio clips using combo of sound & spectrogram	https://github. com/rhine3/specky	Kitzes Lab at Univ of Pittsburgh	Pennsylvania	USA	bioacoustics data analysis/viz python software
Tool	STOAT	Spatiotemporal Observation Annotation Tool; platform for annotation of spatiotemporal diversity data with values from remote sensing & other gridded environmental datasets	https://mol.org/stoat/	Map of Life			geospatial data management remote sensing software
Tool	Tank Watch	list of all commercially available, captive-bred saltwater fish in 'good fish' lists on mobile app to combat illegal trade; bad fish list has species taken unsustainably, not suitable for captivity, endangered, etc.	https://play.google. com/store/apps/details? id=com.ayslingdesign. tankwatch&hl=en≷=US	For the Fishes			education marine/aquatic mobile app wildlife crime prevention
Tool	TerrAdapt Cascadia	Dynamic Conservation Planning tool that provides up-to-date, climate-smart, regional-scale perspectives & local decision-making; based on monitoring lands, projecting future impacts	https://terradapt. org/regions/cascadia/	TerrAdapt.org, Cascadia Partner Forum		Canada USA	AI/ML climate consulting data analysis/viz geospatial local capacity building remote sensing software
Tool	Terrafuse AI	provides hyper-local climate risk scores powered by machine learning to prevent losses & boost decision-making accuracy; focuses on wildlife risk; use high-res earth observation datasets, models trained with 50+ environmental conditions; scores validated with historical/ground-truthed data	https://www.terrafuse.ai/	Brian White, Hunter Connell (Lawrence Berkeley National Laboratory)	California	USA	AI/ML climate consulting data analysis/viz geospatial remote sensing terrestrial

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Tool	Tethys	free open-source temporal-spatial database for metadata related to acoustic recordings (started with marine mammal detection & localization)	https://tethys.sdsu.edu/	NOAA, San Diego State Univ, Scripps Institute of Oceanography		USA	bioacoustics data management marine/aquatic terrestrial software
Tool	The NABIT (Nucleic Acid Barcode Identification Tool)	low-cost, hand-held, field-ready automated tool to validate the identity of a wildlife or food product anywhere in the world, without specialized training, equipment, reagents, or continuous power	https://conservationxlabs.com/nabit		Seattle, Washington	USA	eDNA/genetics hardware wildlife crime prevention
Tool	TimberChain	from Preferred by Nature & iov42; combines blockchain tech, 3rd party certification & market knowledge for increasing traceability, ensuring data integrity, certifying/auditing timber supply chains	https://preferredbynature. org/blockchain	Preferred by Nature			consulting data analysis/viz software
Tool	track2KBA	comprised of functions that facilitate the identification of areas of importance for biodiversity, such as Key Biodiversity Areas (KBAs), based on individual tracking data	https://github. com/BirdLifeInternational/ track2kba	BirdLife International, Jonathan Handley, Martin Beal, Steffen Oppel, Virginia Morera-Pujol, Lizzie Pearmain,			data analysis/viz open-source R/Rstudio software tracking/telemetry
Tool	Trailguard	real-time anti-poaching camera-based alert system, camera trap with edge computing to detect poachers; sends pictures to authorities via GSM, long-range radio or satellite networks; variants - ForestGuard AI to detect logging trucks, WildEyes AI to detect animals to prevent human-wildlife conflict	http://impactatresolve.com/wildtech/	WildTech@RESOLVE			AI/ML camera trap hardware images IoT video wildlife crime prevention
Tool	Trajvis	visualise, animate & create videos of animal movement data from GPS tags	https: //internetofelephants. github.io/trajvis/	Internet of Elephants			GPS data-/bio-logging data analysis/viz tracking/telemetry
Tool	TrapTagger	free, web-based app that uses AI to reduce workload for camera trap data annotation, organization & analysis	https: //wildeyeconservation. org/traptagger/	WildEye & Innoventix		South Africa	Al/ML camera traps data management images software terrestrial
Tool	Trase	data-driven transparency initiative; supply chain & commodity mapping for corporate sustainability	www.trase.earth	Global Canopy			consulting data analysis/viz
Tool	Triton	fisheries transparency portal; collaborative platform for regulators, enforcement, & society to explore ownership data behind world's industrial fishing fleets; data viz & analytics functions	https://imsehawaii. org/2021- library/ewExternalFiles/Tr ibrary/ewExternalFiles/Tr 200verview IMCS C4A DS.pdf	.,			data analysis/viz data management marine/aquatic remote sensing software wildlife crime prevention
Tool	Video and Image Analytics for Marine Environments (VIAME)	open-source, do-it-yourself AI toolkit which allows biologists to train their own computer vision models without ML expertise; has web & desktop version & online annotation archive; used for object counting & identification for marine animals/censusing	viametoolkit.org, viame. kitware.com	Kitware. Inc		USA	Al/ML consulting data analysis/viz images marine/aquatic open-source remote sensing software video
1001	(VINIVIL)	citizen science acoustic monitoring program targeting bats, insects	https://croemer3.wixsite.	Yves Bas, Christian		337	academic lab AI/ML bioacoustics citizen science data management education open-source R/Rstudio
Tool	Vigie-Chiro	& other ultrasound-producing nocturnal taxa; working with a web portal & AI (Tadarida/TadariDeep toolbox)	com/teamchiro/vigie- chiro	Kerbiriou, Jean-François Julien	Paris	France	software terrestrial bioacoustics
Tool	warbleR	facilitates analysis of animal acoustic signals in R; workflow that facilitates spectrographic visualization & measurement of acoustic parameters	https://marce10.github. io/warbleR/	Marcelo Araya-Salas			data analysis/viz open-source R/Rstudio software
Tool	WaveGlider	ocean surface robot; autonomous, unmanned surface vehicle powered by wave & solar energy; operates individually or in fleets delivering real-time data for up to a year with no fuel; open & extensible platform; hosts trainings, mission planning sessions, has launch, piloting, recovery services, 24/7 support	https://www.liquid- robotics.com/wave- glider/overview/	Liquid Robotics			climate data-/bio-logging drones/AUV's hardware marine/aquatic remote sensing

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Tool	Wildbook	WildMe's open-source individual animal identification platform to support mark-recapture, molecular ecology studies; API for cross-platform data inport/export; animal biometrics platform	https://github. com/WildMeOrg/Wildbook	Jason Holmberg, WildMe	Portland, Oregon	USA	Al/ML data analysis/viz images marine/aquatic open-source python software terrestrial
		open-source machine learning platform for individual animal	https://github.	sees. To make grant and	January, Gregori	30.	AI/ML citizen science data analysis/viz data management images open-source
Tool	Wildbook Image Analysis (WBIA)	detection, classification & identification; backend service supporting machine learning for wildlife conservation on Wildbook		Wild Me	Portland, Oregon	USA	python software AI/ML
Tool	WildID	camera trap image processing for Southern African species using machine learning-based software	https://www.wildid.app/		Cape Town	South Africa	camera trap data management images software terrestrial
Tool	Wildlife Insights	global cloud-based camera trap data processing platform with built in detection ML models, near-real time info, storage/sharing tools	https://www. wildlifeinsights.org/home	Conservation International, NC Museum of Natureal Sciences, Smithsonian, Map of Life, WWF, WCS, Google, ZSL	Cupe town	South Airled	AI/ML camera trap citizen science data analysis/viz images local capacity building open-source software
Tool	Wildlife Sentinel app	anonymous illegal wildlife trade reporting app to help staff at airports, airlines & aviation companies report suspected wildlife trafficking & corruption; available on Apple & Google Play stores in English, Spanish & Portuguese	https://www.traffic. org/news/new-mobile- reporting-app-is-helping- combat-corruption-and- wildlife-trafficking-in-the- aviation-industry/	Crime Stoppers International, USAID Routes Partnership			consulting images mobile app wildlife crime prevention
F ool	wildlifeDI	facilitates the calculation of indices of dynamic interaction for wildlife telemetry data; also functions for more advanced contact analysis	https://github.com/jedalong/wildlifeDI	Jed Long, Trisalyn Nelson, Stephen Webb, Kenneth Gee			data-/bio-logging data analysis/viz open-source R/Rstudio software tracking/telemetry
		augmented reality game takes place on National Park lands; science fiction landscape, players encounter alien organisms & phenomena threatening to leak into our dimension; can join quests to explore real-world areas of scientific interest at the Parks & be		AAAS, Innovative Learning			citizen science education mobile app software
Tool	WildSpot AR	invited to join citizen science projects available through SciStarter modular system that makes it easy to implement LPWAN into IoT solutions; based off WisBlock Base board (provides power supply, battery/solar panel supplies, charging block, connectors for programming & debugging), platform carrier that plugs-in to	https://www.wildspot.app/	Institute, Springtail Media		USA	terrestrial
Γοοl	Wisblock	WisBlock Core processing board & multiple WisBlock modules protected areas can use camera traps w/Al to detect threats & monitor wildlife in real time, & volunteers can sign up to help	com/pages/wisblock https: //wildlifeprotectionsolutio	Rak Wireless			IoT AI/ML camera trap citizen science data management
Tool	wpsWatch	monitor & review camera trap images one-stage deep learning-based detection model designed to be capable of detecting small objects with high accuracy & high speed,	ns.org/wpswatch/ https://www.mdpi.	Wildlife Protection Solutions IRISA, Institut Charles			wildlife crime prevention AI/ML data analysis/viz geospatial images remote sensing
[ool	YOLO-fine Z-ray drone	allowing further real-time applications autonomous underwater vehicle developed by US Navy, Scripps Institute; ocean glider that collects acoustic data via 27-element hydrophone awway installed in sonar housing	4292/12/15/2501 http://www.navaldrones.com/ZRay.html	Delaunay Naval Drones		France	software bioacoustics drones/AUV's marine/aquatic
ГооІ	Zamba Cloud	app that automatically detects what species are present in camera trap videos, can upload directly to site; has 23 species classes (bird, human, primate, reptile, rodent, etc.) + no-animal class; 94% accuracy in blank vs non-blank, 79% top-3 accuracy (correct label in top 3)	https://www.zambacloud. com/#what-is-zamba- cloud	Driven Data			AI/ML camera trap data management images mobile app python software video

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Tool	Zendo	All agent that can be taught to identify & locate objects in camera- trap images using as few as 10 images to start	https://deepai.org/zendo	DeepAl	San Francisco, California	United States	AI/ML camera traps data analysis/viz images software
Tool	ZoaTrack	platform to calculate movement metrics & space use for individually marked animals; focused on Australasian region; open-access projects available; hosts different home-range density estimator tools which can overlaid with environmental layers; results can be exported into Google Earth or Esri	https://zoatrack.org/	University of Queensland, Atlas of Living Australia			data analysis/viz data management geospatial GPS open-source remote sensing software tracking/telemetry