

DevoLearn:

a platform for open Developmental Data Science, Machine Learning,
and Education

Developing the nematode (*C. elegans*) and other creatures
using simulation, analysis, and
theory-building

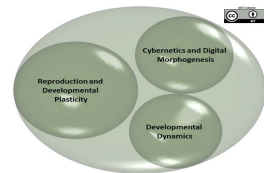


Building the World's First Digital
C. elegans (Open-source)



<http://openworm.org>

NEW! Building the NeuroCommons
doi:10.1007/s12021-020-09508-1



Bradly Alicea, Mayukh Deb, Ujjwal
Singh, and the DevoWorm group

devoworm.weebly.com
www.github.com/devoworm
www.github.com/devolearn



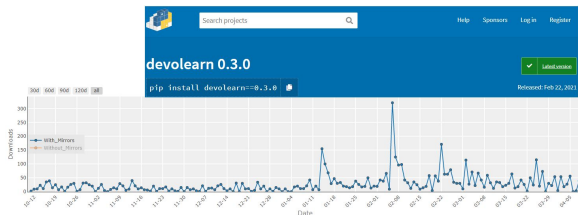
Openly-available Primary,
Secondary, and Tertiary Datasets
devoworm.github.io/devozoo/index.html

Segmented microscopy data, public repositories,
literature mining.



github.com/devolearn

DevoLearn



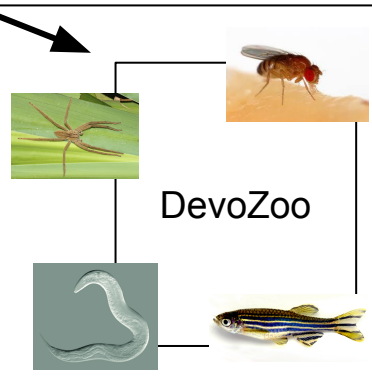
DevoLearn
0.3.0

pypi.org/project/devolearn/

Species-specific
Models
(DevoWormAI)

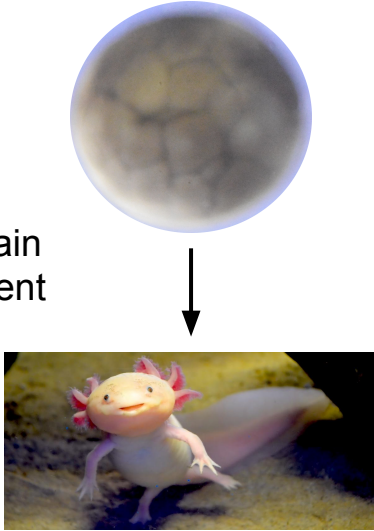


devoworm.github.io/devowormai/index.html



Deep Learning and Quantitative Morphology

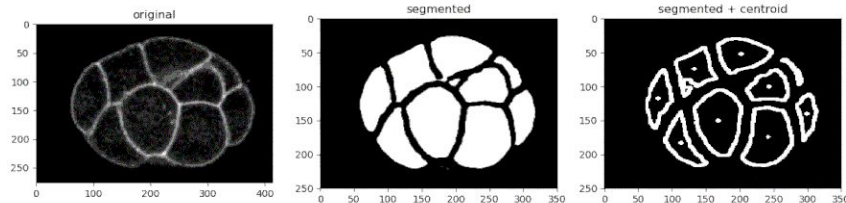
Axolotl brain development



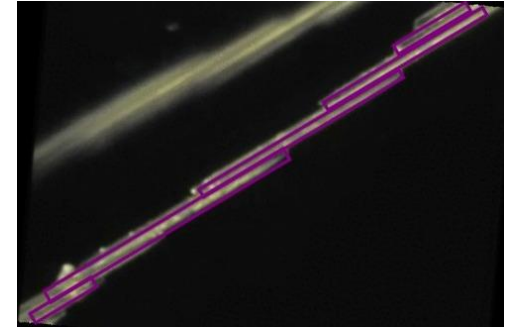
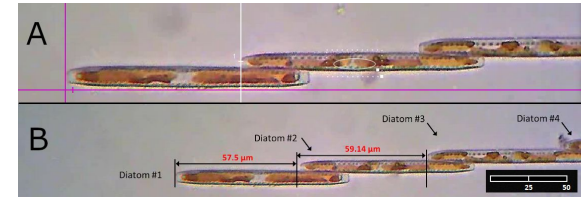
Theory-building to explain developmental processes



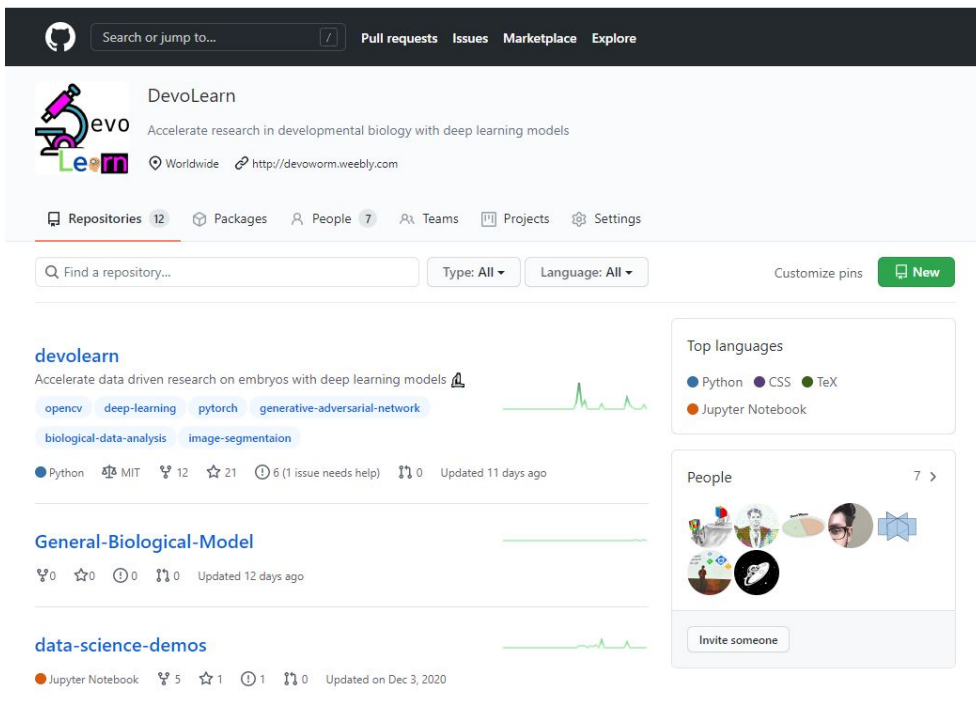
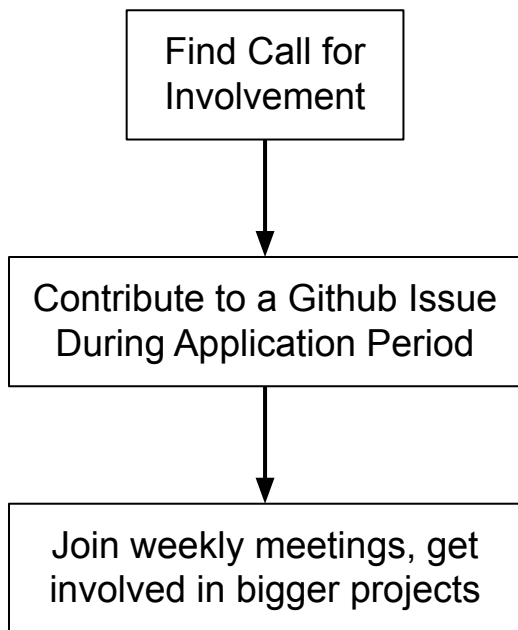
C. elegans embryogenesis



Bacillaria cell colony morphology



Preparation for Google Summer of Code application period: education and evaluation





DevoLearn

Accelerate research in developmental biology with deep learning models



Worldwide <http://devoworm.weebly.com>

Mayukh Deb

DevoLearn developer, maintainer

Ujjwal Singh

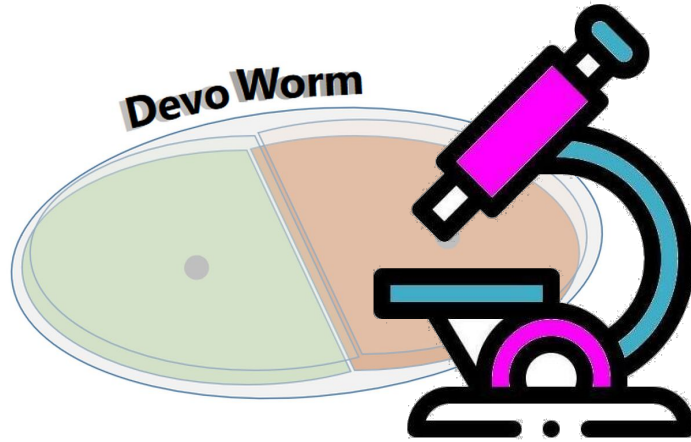
DevoWorm AI and DevoZoo developer

 Repositories 12  Packages  People 7  Teams  Projects  Settings

Being developed by contributors and the main group

- Data science demos: Jupyter notebooks and methodological tutorials.
- Education: teach computational students about developmental biology, and vice versa. Epistemological Directories (EDs) for lifelong learners.
- Theory-building: build explanatory frameworks and hypothesis generation for data generated through methods.

Thank You!



Contact: balicea@openworm.org
Join our Slack (#devoworm, #devolearn)!
<https://launchpass.com/openworm>