

Fostering user-driven learning communities in-person and virtually: Examples from Earth Engine meetups

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Introduction

In today's rapidly developing earth observation ecosystem, new data sources, software and platforms mean that students and practitioners have to continually learn how to use them. Google Earth Engine is one such geospatial cloud-based platform which has attracted much user interest for research, nonprofit and commercial applications. However, users may have to first learn how to code in JavaScript or Python, as well as learn how to modify familiar workflows for a client-server and parallel computing paradigm. **Learning communities where users share knowledge, mentor each other and help each other troubleshoot are useful for enabling learning-while-doing, especially when a steep learning curve is involved.** This poster introduces two examples of fostering user-led learning communities around Earth Engine, one in-person and one virtual.

In-person meetups

The first example was an in-person user group at Yale University called EE@Yale (<https://eeyale.github.io>), which consisted of weekly to biweekly meetups where Earth Engine users from different departments shared talks and helped each other with learning how to use the platform. These meetups ran between 2017 and 2020, moving into a virtual format in 2020.

Virtual meetups

The second example is a series of Earth Engine Virtual Meetups starting in 2019 which saw an international group of users come together for an hour once a month for user-led talks and open knowledge sharing. After the guest speaker has shared their presentation, an open question-and-answer session is facilitated by the moderator. The sessions are also livestreamed, recorded and uploaded to a YouTube channel.

Meetup templates

Lightning Talks: 3 to 5 minute talks given by up to ten users, one question from the audience after each talk

Guest Speakers: 20 to 40 minute presentations by a user on a topic of their choice, followed by questions

Mini-Hackathons: Solve a problem or build a simple workflow together, or create a community resource

Co-Working: Work in the same space or video call on your own projects but be open to help each other

Best practices

Stakeholder engagement and co-creation: Begin by gathering stakeholders in an open meeting so they can decide what form these meetups should take

Motivating and welcoming users: Create an inclusive and welcoming environment where people from different backgrounds feel comfortable, ensure diverse representation in speakers, provide snacks

Fostering a culture of learning from each other: Ask speakers about their learning journeys, encourage users to answer each other's questions. Staying in touch between sessions via Slack or other messaging platforms could also be useful.

Invite users to lead and support meetups: Take turns to plan, host and provide support during sessions, such as helping users who may have technical issues or with IT support during virtual meetups.

Useful tools

Google Workspace: Facilitates collaborative creation and compiling slides for Lightning Talks

Canva: Free graphic design software for posters

Zoom: Video call software, recording & livestreaming

Slido: Polling and audience interaction platform

Eventbrite: Registration platform for meetups

GitHub Pages: Free website hosting

Challenges and some solutions

In-person: Logistics may be more difficult to plan than for virtual meetups (booking a venue, providing snacks). What helps is meeting at the same location and time, pick a simple snack (e.g. popcorn). Users may show up late as they need to travel to the venue, so add a time buffer to the start of each meetup. You may need to eventually bring in external speakers. Twitter is a great source of speakers, or encourage past speakers to suggest other potential speakers.

Virtual: Each meetup may consist of a different group of people; it is challenging to facilitate relationship building between participants via video call. Dedicated networking meetups and social media interaction may help. Audience participation may be low or uncertain so prepare questions in advance for speakers. Technical problems may occur, thus it is best to do a technical test beforehand. Ask an audience member to check and let you know if things don't work.

Conclusion

The lessons learned from these user communities can be applied to facilitating working groups or meetups around other earth observation tools or data. Learning communities enable the sharing of knowledge and provide troubleshooting support that is invaluable. Institutional support for these user-led learning communities is helpful - this can take the form of sponsorship or provision of meeting spaces, software subscriptions, refreshments during meetup, dedicated staff support for IT or administration etc.

Statistics

Range of attendees per meetup session:
4-40 (in-person), 10-100 (virtual)

Larger events are also possible. EarthEngine@SG, a user-led, free-to-attend one-day virtual event on 13 September 2021 featured a keynote, 4 parallel talks, 3 workshops and networking. 1,291 registrations for the sessions with an estimated 400 unique attendees.

YouTube channel: 500+ subscribers, over 10,000 views as of May 2022