Using GitHub for Project Management

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EcoDataScience
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Today's Agenda

- Why GitHub for Project Management?
- GitHub Tools for Project Management
  - Issues
    - Overview
    - Example
    - Demo
  - Projects
    - Overview
    - Example
    - Demo

About me

- NCEAS Learning Hub Data Training Program Lead
- EcoDataScience & RLadies SB Co-organizer
- I'm not an expert on this topic

Why am I here?

- I'm a Virgo. Organization and systems bring me joy.

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With this set.. Feel free to interrupt me, ask questions, share your experiences with these tools or with project management in general.

Let's have a conversation about this topic and learn together.

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(in an academic research context)

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- Also from the software development world comes the idea of using product management software to organize all the moving parts of a project.
- As scientist, we can relate because research also has many moving pieces.

Why talk about GitHub for Project Management?

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To <u>organize all the moving parts of a project</u> (in one place), from analysis to final product to outreach.

GitHub for Project Management

- **Organize and track projects** with single or multiple & overlapping users

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- **Streamline technical discussions** for people with different responsibilities

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- **Key for onboarding Future You and Future Us**

- **Already managing code** and is linked to collaborators

Openscapes GitHub Clinic slides

GitHub Tools for Project Management

- Issues

- Projects

GitHub Issues

> Issues "track ideas, enhancements, tasks, or bugs for work on GitHub." - [GitHub](#)
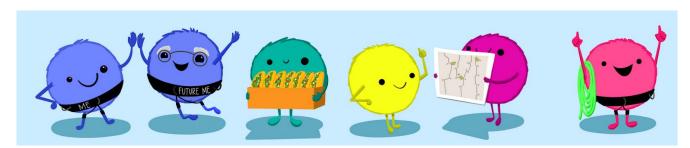
GitHub Issues

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- Let you discuss/organize in the same place as your code & documentation (compared with Asana, Trello).

GitHub Issues

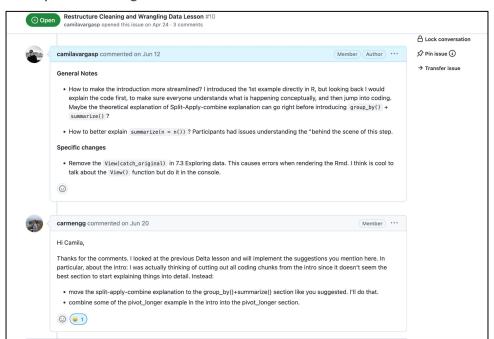> Issues "track ideas, enhancements, tasks, or bugs for work on GitHub." - GitHub

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- A "place" where you can have active discussions about any "issue" of your project(s). Code related or not.

- It streamlines technical discussions with people who are coming/joining the group.

GitHub Issues

- A project bug tracker
- Digital "Lab Notebook" (ideas, brainstorming)
- Act like an external memory (notes to self, links to resources)
- Identify and delegate task
- Documentation of process over time

Artwork by Allison Horst

GitHub Issues

You can see and access and issue from

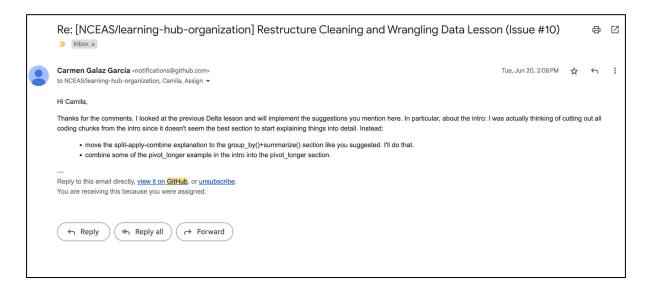- Your project repository web interface on GitHub

GitHub Issues

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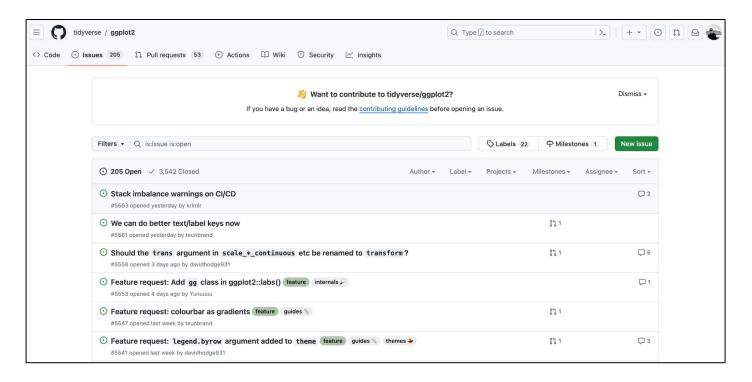- Your email, just like regular messages (this can, of course, be configured)

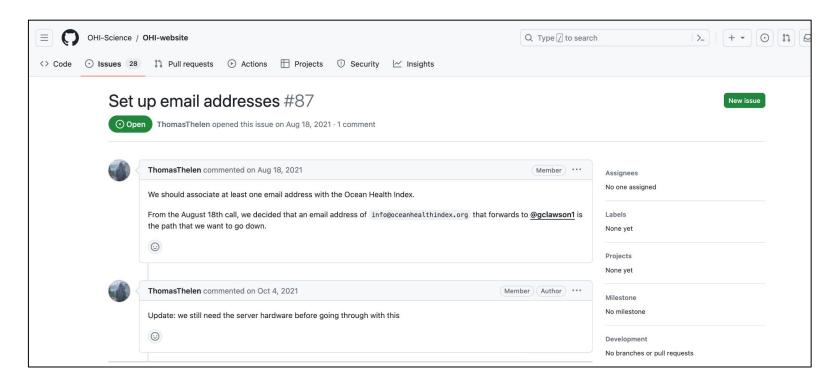## GitHub Issues

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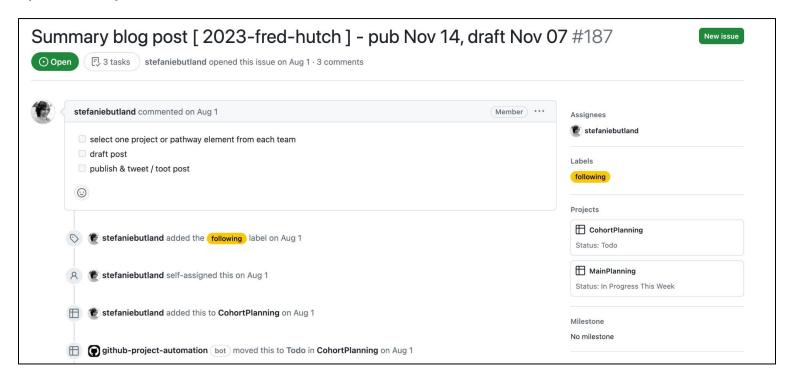● Your email, just like regular messages (this can, of course, be configured)

GitHub Issue: Example

- ggplot2 bug reports, code, feature, & help requests

GitHub Issue: Example

- Ocean Health Index Team

GitHub Issue: Example

- Openscapes Team

stefaniebutland commented on Sep 28   Member Author •••

"Tell your roommate moments" like posit::conf sharing back to Julie.
Near end, what was different about this cohort?
Julie's back from vacation in plenty of time to review

😊

stefaniebutland changed the title ~~Summary blog post [2023-fred-hutch]~~ Summary blog post [2023-fred-hutch] - pub Nov 14, draft Nov 07 on Sep 28

stefaniebutland added this to MainPlanning on Oct 29

stefaniebutland moved this to In Progress This Week in MainPlanning on Oct 29

stefaniebutland mentioned this issue on Nov 2

Champions Cohort: 2023-fred-hutch. Aug 29 - Oct 24 Openscapes/how_we_work#268   ⊘ Closed

stefaniebutland commented last month   Member Author •••

@jules32 *rough* draft PR for wrap up post: Openscapes/website-new#69

For now, each team/lab text is not good - just copied what I had in Call 5 digest. It would help me a lot if you took a quick look and noted anything I might highlight. I haven't yet rewatched the video to do my next round of draft.

😊

GitHub Issue: Example
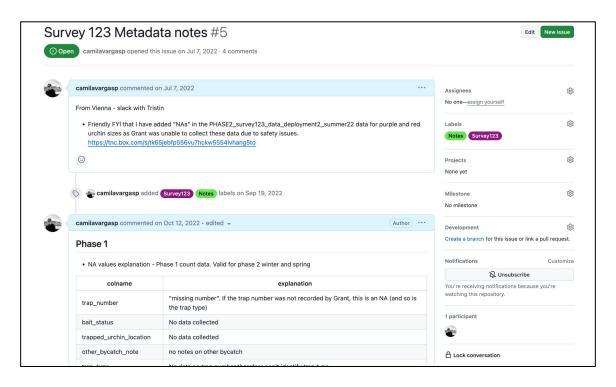
- Collaborating with myself

GitHub Issues Demo 1

1. Create a new issue from: repository/issues
2. Tag a collaborator
3. Add comment
4. Paste and image

GitHub Issues Demo 2

1. Create a new issue from code
2. Add label
3. Assign who is responsible
4. Add To Do list
5. Add emoji
6. Show watching and what that means

GitHub Project

- "A project is an adaptable <u>spreadsheet</u>, <u>task-board</u>, and <u>road</u> <u>map</u> that integrates with your issues and pull requests on GitHub to **help you plan and track your work effectively**." (GitHub)
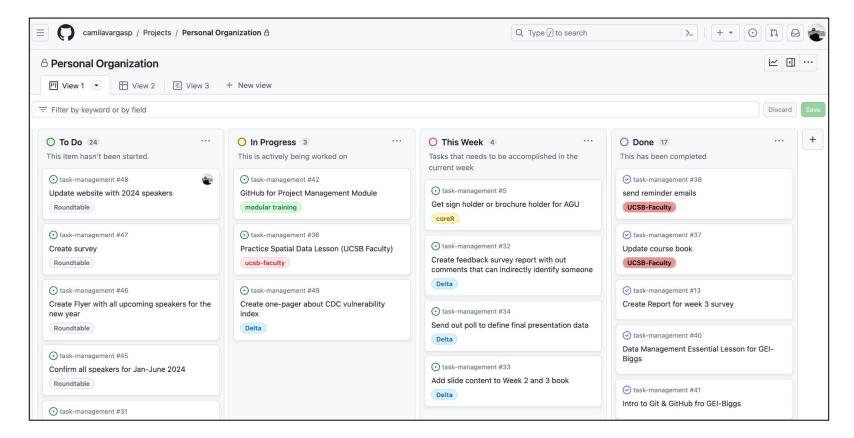
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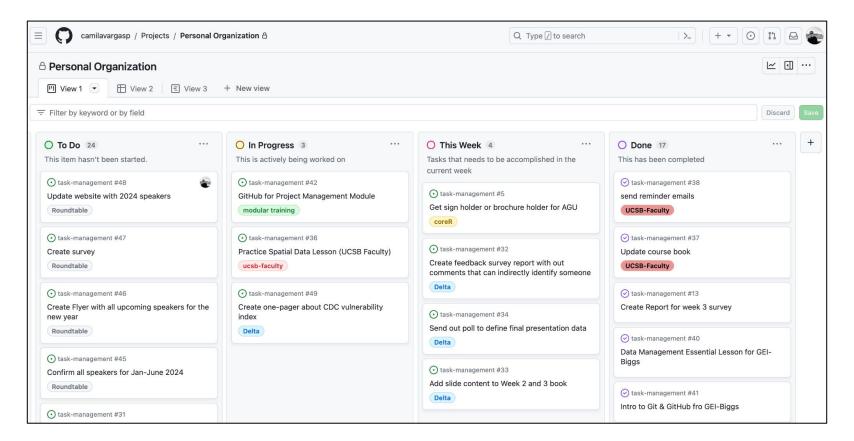
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- It is an umbrella that can include many issues.

GitHub Project

- "A project is an adaptable spreadsheet, task-board, and road map that integrates with your issues and pull requests on GitHub to **help you plan and track your work effectively**." (GitHub)

- Projects are GitHub's main tool for project management.
- It is an umbrella that can include many issues.
- Helps you visualize everything that is being tracked on issues.

GitHub Project

GitHub Project

A project is an adaptable <u>spreadsheet</u>, <mark><u>task-board</u></mark>, and <u>road map</u>...

GitHub Project

- A Project can be created
  - within an Organization
  - by a User (under that user account)
- A project can be linked to a repository.
- In a project you can see and create issues in different repositories.

GitHub Project

- A Project created **within an Organization**
  - Supports <u>issues from any repositories</u>
  - Editable by <u>any users in the organization</u>

GitHub Project

- A Project created **from a user account**
  - Supports issues <u>from any repository</u>
  - Editable <u>only by this user</u>
    - *Unless the user allows other users to have admin-level powers in that project.

GitHub Project Demo 1

- Create a project within Ecodatascience organization
- Create a new Draft in the project
- Add issue created in previous Demo to project
- Add and customize columns
- Close issue and show automatization

GitHub Project Demo 2

- Navigate to my Personal Organization project
- Different ways to open the project
- Different views
- Customize categories
- Customize labels
- Start and End dates
- Milestones

Summary: The Workflow

- Issues are related to a repository
- Projects can be created under a user or organization
- Use Issues to track and document each task or idea of your project
- Use a GitHub Project to oversee all the moving pieces, each member can track their tasks and ensure equitable effort.
- Mix and match repositories and project categories as you see fit

Resources and References

- [Openscapes GitHub for Project Management (Champion Series)](#)
- [Openscapes GitHub Clinic slides](#)
- LTER SciComp Workshops
  - [GitHub Issues](#)
  - [GitHub Projects](#)
- GitHub Docs
  - [Issues](#)
  - [Projects](#)