Session 3 - Further uses of GitHub

Emma Karoune and Celine Kerfant

On behalf of International Committee on Open Phytolith Science

Resources used:

Esther Plomp's Github Intro workshop

Mozilla Science Lab's Study Group Orientation,

Friendly GitHub Intro by Kirstie Whitaker &

Developing Collaborative Documents *Click here for the paired online materials* by Malvika Sharan

Open Data presentation - Li-Ying Wang - https://doi.org/10.5281/zenodo.5717154

The Turing Way Workshop: Open, reproducible and FAIR Research - Emma Karoune & Malvika Sharan

https://doi.org/10.5281/zenodo.6346555
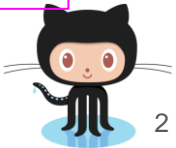
1

Learning outcomes - Session 3

Further uses of Github
- To know how to enable and edit repos for web pages.
- To know how to link repositories to Github.
- To know how to use project boards.

What we learnt in session 2:
- To know what version control is.
- To start using a collaborative workflow in Github.

Do you have any questions from session 2?

End of slides - there's more!

There are more resource at the end of the slides that we will not cover.

- There are some instructions and links for connecting and using R Studio with Github.
- We will make these as video tutorials too so watch out for the links being advertised.

Schedule

0:00 - 0:15 Log in and setting up a GitHub account

0:15 - 0:45 Making webpages - profile page, simple webpage to more advanced.

0:45 - 1:00 You make a profile pages or simple webpage!

1:00 - 1:25 Linking in repositories - zenodo, open science framework, figshare

1:25 - 1:40 Exercise to link repositories

1:40 - 1:50 Using project management boards

1:50 - 2:00 Wrap up & questions.

Extra resources:

- Linking R studio and working with version control

Code of Conduct

Yes / Encouraged

- Show empathy and kindness toward others
- Be respectful of differing opinions, viewpoints, experiences and **technological choices**
- Give and gracefully accepting constructive feedback
- Take responsibility for mistakes and any impact on others, learn from the experience
- Taking breaks to recharge!

Code of Conduct

No harassment

- Verbal and text comments that reinforce social structures of domination related to gender, gender identity and expression, sexual orientation, ability, physical appearance, body size, race, age, religion or work experience.
- Use of sexual or discriminatory imagery, comments, or jokes
- Deliberate intimidation, disruption
- Unwelcome sexual attention
- Advocating for, or encouraging, any of the above behaviour

If the Code of Conduct is violated you will be asked to stop or leave the space.

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Promoting you and your work using Github

As a researcher you need to:

- have a web presence for yourself
- advertise, write about, present your research online

Hello There

Create a profile page and website

- Share things simply - non-specialist writing
- Invite people interested in your project to collaborate
- Be open about the project status and invite fixes
- Branding: decide what you communicate to people instead of them finding out through other platforms

How can you do this through Github?
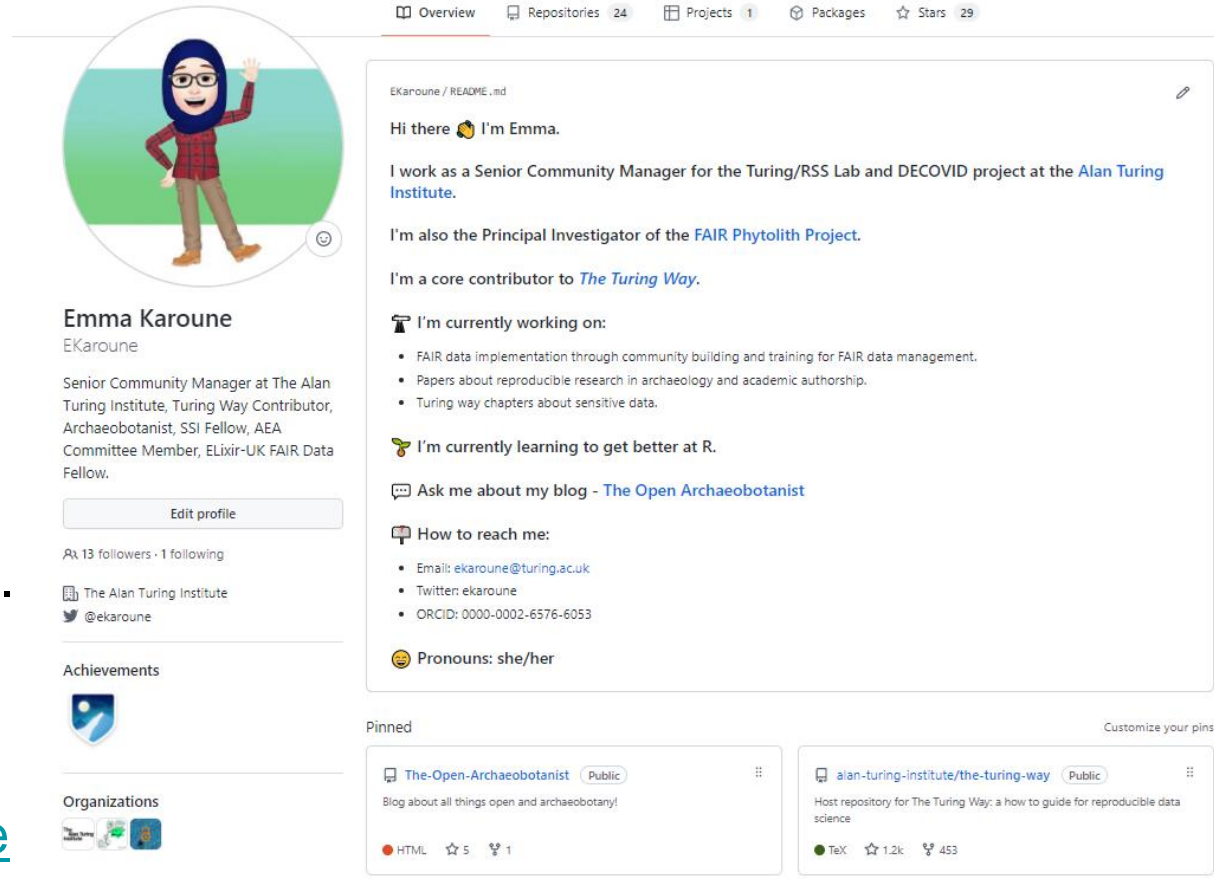
- Github profile page - like a short CV or project advert
- Github pages
  - For you - CVs, blogs, presentations
  - Your projects - to advertise, give info, project updates, attract contributors

Link these to social media - twitter, facebook, etc.

Github Profile

- Make your Github profile into an advert for you and your work.
- Make a repo in the exact name as your account and it will create a README.md with a template to fill in.
- This is automatically generated as your profile README.md.
- Link for more help here

Working with GitHub Pages

- A static site hosting service that takes HTML (or related) files straight from a repository on GitHub.
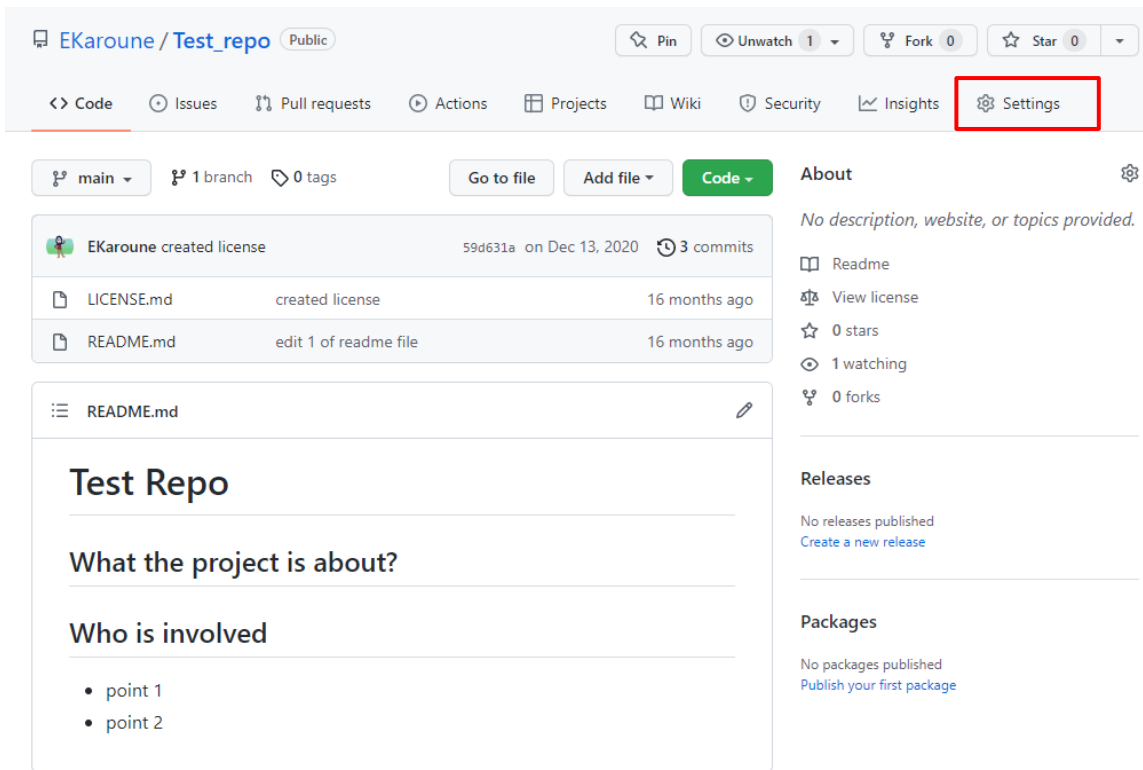- You can host your site on GitHub's **github.io** domain or your own custom domain.

Different ways to create web pages using github:
- Simplest way - enable from repository and use github themes to create one page.
- Slightly harder - use a remote jekyll theme and create multiple pages.
- Bit harder - Fork a theme repository and edit.
- Hardest - create your own webpage theme from scratch.

1. Create your site

1. You need a repository so make a new one or choose the repo you want to make into the website.
● Click settings.

2. Click on pages

- Click pages

- Click none and then main.

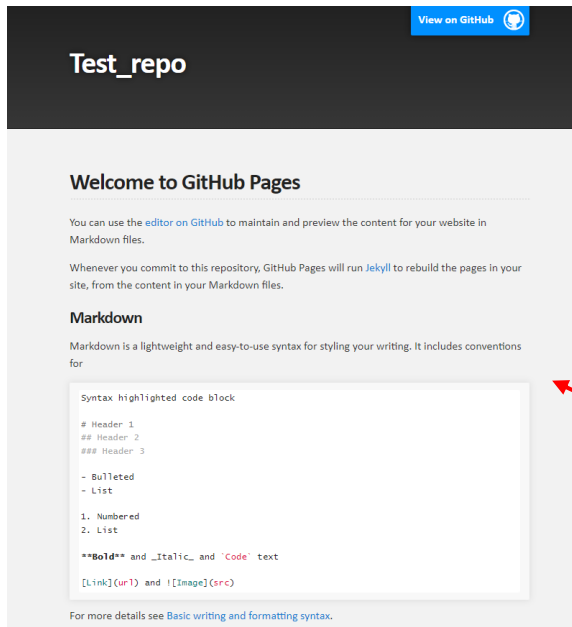# 3. Choose a theme
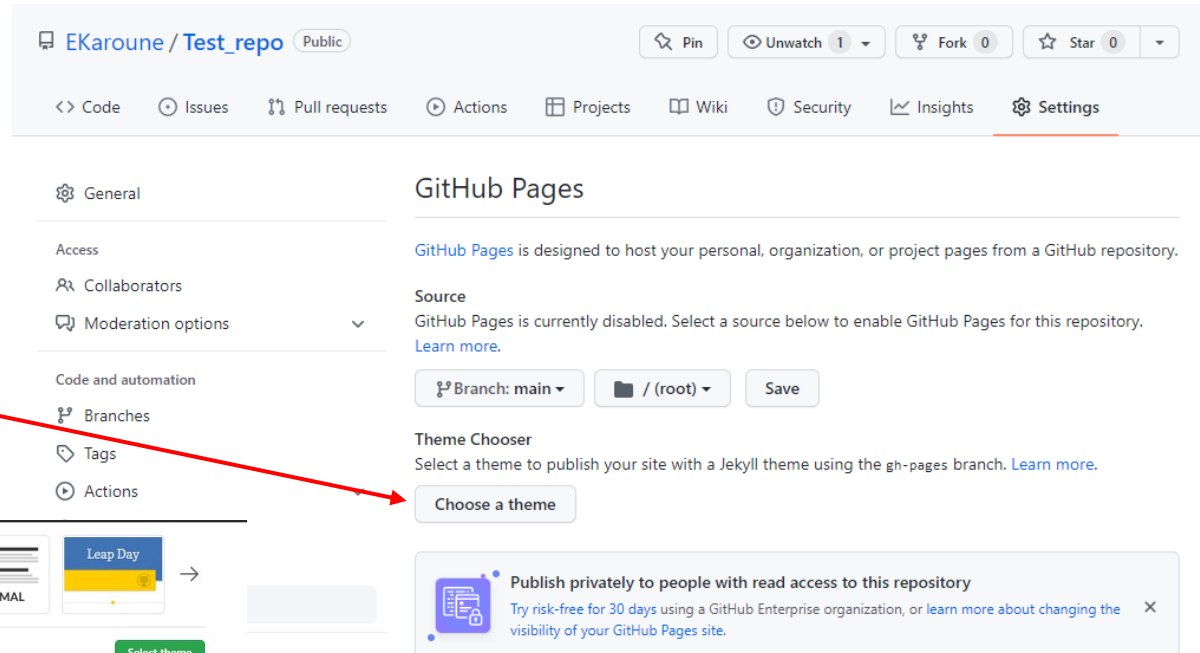
Click here

Click on a theme at the top and
then select a theme green button
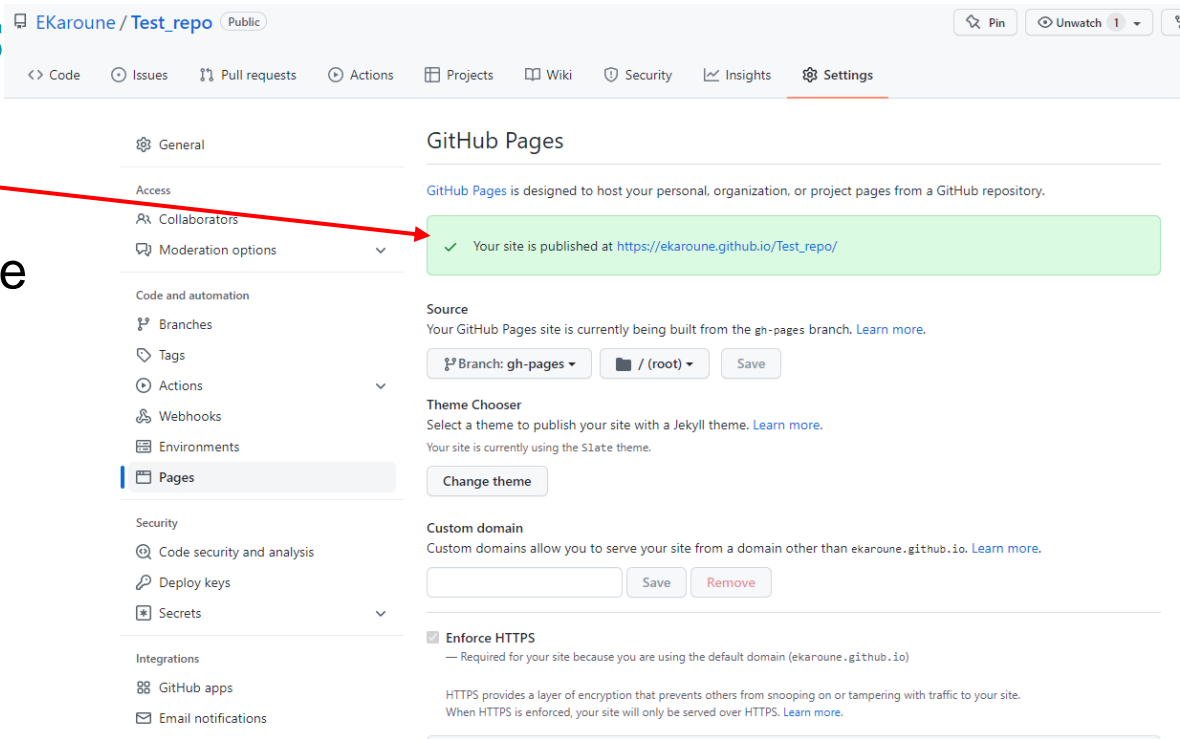
4. Web page address

Find your web address here

Click on the web address to see the web page

This is what you should see - it creates a branch for your gh-pages.

5. Make changes

Can keep it in the gh-pages branch or move into main branch.

In the main branch, the landing page will be your readme file.

6. Add a different remote theme

Check out free jekyll themes here:
https://jekyllthemes.io/free

Change the config.yml file

- ● remote_theme: *then add github repo name*

	gh-pages ▾	Test_repo / _config.yml		Go to file	⋯

EKaroune changing remote theme link   Latest commit 3d36c64 now   🕘 History

👥 1 contributor

1 lines (1 sloc) │ 42 Bytes   Raw   Blame   🖥 📋 ✏ 🗑

```
1    remote_theme: just-the-docs/just-the-docs
```

See examples

- Simple Theme example:

  https://github.com/malvikasharan/developing_collaborative_document

- Choose from many free and open source templates

  - https://jekyllthemes.io/free

  - https://github.com/planetjekyll/awesome-jekyll-themes

  - Example - https://ekaroune.github.io/The-Open-Archaeobotanist/

- Building advanced websites:

  - Advanced websites using Jekyll: https://openlifesci.org/

  - Advanced websites using Hugo: https://sgibson91.github.io/ / https://themes.gohugo.io

  - YouTube video of 'Create a free data blog with jekyll & Github pages' - https://www.youtube.com/watch?v=7SBXl94xNl8

  - Carpentires course with Github and html. - https://carpentries-incubator.github.io/jekyll-pages-novice/

Now it is your turn!

Pick to make a profile page or simple webpage

Instructions are in the slides or the shared document

Make your repo citable and FAIR!

FAIR

FAIR? (Presentation slides)   29
GO FAIR overview
Wilkinson et al. 2016 (Paper on FAIR)
The Turing Way: FAIR (general overview)

Findable

- Archive your data in a data repository with metadata and a persistent identifier

Accessible

- Determine what should be shared
- Ensure there is an access procedure in place
  - ≠ open!

Interoperable

- Use open/common formats and languages
- Consistent vocabulary
- Metadata standards

Reusable

- Apply a licence to specify how others can reuse your data
- Documentation

https://doi.org/10.5281/zenodo.4638744

Data Article

Neodymium isotopes in modern human dental enamel: An exploratory dataset for human provenancing

Esther Plomp

It is a requirement of most journals for you to write data and code availability statements.
- you need a DOI
- Github does not provide these so you need to link to a repository.

Data accessibility

Repository: IsoArcH [1]
Data identification number: 10.48530/isoarch.2021.011
Direct URL: 10.48530/isoarch.2021.011
Software availability: https://doi.org/10.5281/ZENODO.5150520 [6]
Data is available under the Creative Commons BY-NC-SA 4.0 license.

References

[5] E. Plomp, Neodymium isotopes in modern human dental enamel: an exploratory dataset, IsoArcH (2021), doi:10.48530/ISOARCH.2021.011.

[6] E. Plomp, J.C. Peterson, [software] EstherPlomp/figures-Nd-data, Zenodo, 2021. doi:10.5281/ZENODO.5150520.

[7] C. Stantis, [software] stantis/IsoDataVis: first (Official) release, Zenodo, 2021. doi:10.5281/ZENODO.4743734.
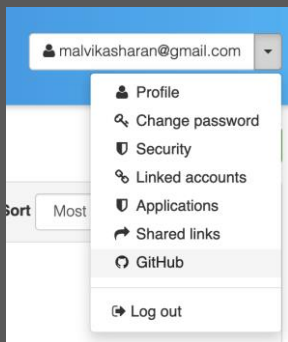
Upload to free openly accessible online repositories

- Trustworthy digital repository (TDR)
- Allows to generate shareable DOI
  - Digital Object Identifier

- Not a TDR
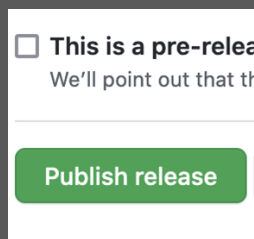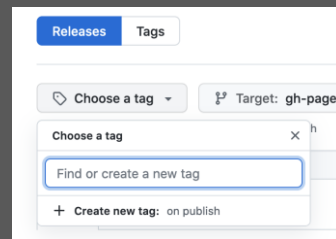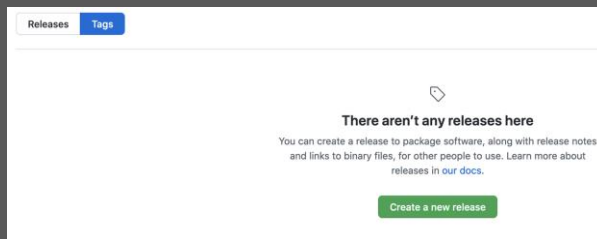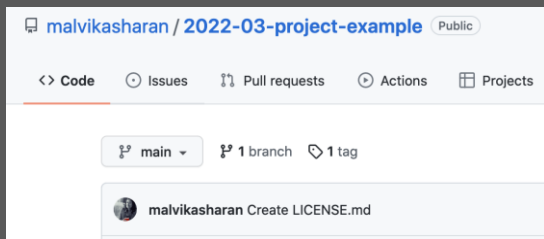- cannot ensure long-term access

Linking Zenodo
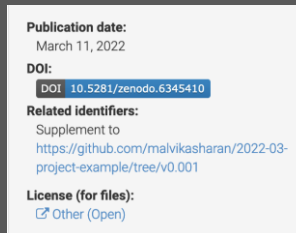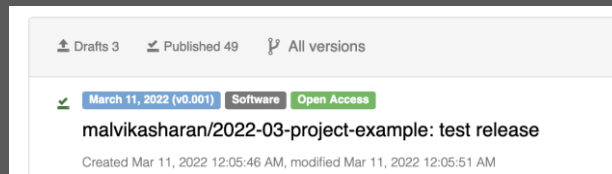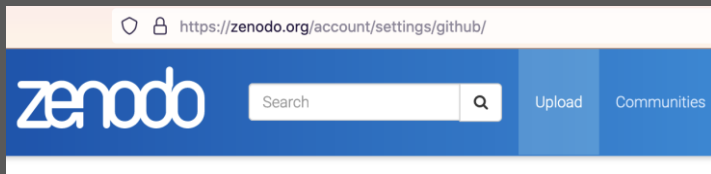
Zenodo

GitHub

Zenodo

Citable DOI

malvikasharan/2022-03-project-example

DOI 10.5281/zenodo.6345410

Getting a persistent identifier

1. Have a repository in mind that you're creating the identifier for
2. Set up an account at Zenodo (using your GitHub, email or ORCID)
3. Connect GitHub/Zenodo by authorizing Zenodo
4. On Zenodo, go to Settings -> GitHub, then toggle the button on for the repository that you want an identifier for
5. On GitHub: create a new release for your repository (snapshot that will be preserved on Zenodo)
6. On Zenodo: go to the Upload tab and add any additional information before publishing.
7. On GitHub you can update your citation file with the DOI and add a DOI button in your Readme file

DOI 10.5281/zenodo.5150521

Figures-Nd-data

Data and code underlying the figures

Create a CITATION.cff file in your repository, which will provide you with an example template that you can fill in in two minutes.

Instructions from how to do this in The Turing Way - https://the-turing-way.netlify.app/communication/citable/citable-cff.html

EKaroune create citation cff file

Latest commit 92f6869 4 days ago ⏱ History

👤 1 contributor

27 lines (27 sloc) | 903 Bytes

Raw | Blame

```
1    cff-version: 1.2.0
2    message: "If you use this training material, please cite it as below."
3    type: software
4    authors:
5    - family-names: Karoune
6      given-names: Emma
7      affiliation: The Alan Turing Institure
8      orcid: 'https://orcid.org/0000-0002-6576-6053'
9    - family-names: Kerfant
10     given-names: Celine
11     affiliation: Universitat Pompeu Fabra
12     orcid: 'https://orcid.org/0000-0002-4297-5469'
13   title: International Committee on Open Phytolith Science Training Resources
14   version: 1.0.0
15   doi: 10.5281/zenodo.1234
16   date-released: 2022-04-06
17   url: "https://github.com/open-phytoliths/ICOPS-training-2022"
18   abstract: >-
19     This is an archive of the repository of training material from workshops and other training events organised and run by the International Committee on Open Phytolith Science
20   keywords:
21     - Phytoliths
22     - Archaeobotany
23     - Open Science
24     - Open Data
25     - Open Access
26     - Open Source
27   license: CC-BY-4.0
```

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Linking Open Science Framework

Sign up OSF and created a repo to hold your data

- Go to https://osf.io to create an account, and then create a new project

We can link Github and other add-ons to OSF

- select Add-ons

- configure Add-ons

Kiwulan_Burials.xlsx

Delete   Download   Share   View   Revisions

🔍 Filter   ⌃

🧊 A Bayesian networks approach to inf...

− ○ GitHub: LiYingWang/kwl-burials (...

  + 📁 .github

  📄 .gitignore

  📄 .Rbuildignore

  📄 .Rprofile

− 📂 analysis

  + 📁 code

  − 📂 data

    + 📁 derived_data

    📄 DO-NOT-EDIT-ANY-FILES...

  − 📂 raw_data

View this file on GitHub.

| burials | key | description | dates |

Show rows with cells including: [＿＿＿＿＿]

Layer	ID	Burial_axis	Degree_axis	Condition	Length	Width	Hight	Pit	sampled	start_layer	start_depth
1	0	1	290	3	115	70		P9		5	-70
1	1	1	295	2	102	60	30	P051	Y	14	-20
1	2	1	290	2	104	75	60	P051	Y	12	14
1	3	1	290	1	130	82	60	P050		7	-25
1	4	1	300	2	140	73	30	P038		2	-30
1	5	1	285	2	70	50	35	P050		7	-30
1	6	1	310	3	85+	55	13	P038		4	-52
1	7	1	290	2	130	60	29	P028		8	-30
1	8	1	295	2	100	58	15	P038		5	-75
1	9	1	300	1	130	70	60	P052	Y	6	4
1	11	1	300	2	90+	60	40	P060	Y	9	-20
1	12	2		3			9	P038		5	-79
1	15	1	290	2	95	60	27	P040	Y	8	-30
1	16	1	300	1	76	45	37	P072	Y	10	-10

OSF**HOME** ▾

My Quick Files | My Projects | Search | Support | Donate | ◉ Li-Ying Wang ▾

A Bayesian networks approach to infer ... | Files | Wiki | Analytics | Registrations | Contributors | Add-ons | Settings

2.7MB | Make Private | Public | ⌐ 0 | ⋯

W

A Bayesian networks approach to infer social changes in burials in northeastern Taiwan during the European colonization period

Contributors: **Li-Ying Wang,** Ben Marwick

Affiliated Institutions: University of Washington

Date created: 2021-03-02 03:37 PM | Last Updated: 2021-08-24 10:57 PM

Identifier: DOI 10.17605/OSF.IO/XGA6N

Category: 🎁 Project

Description:

In this paper, we introduce a Bayesian framework on ERGMs that enables an efficient computational process, effective quantification of uncertainty, and robust model evaluation of network properties. We tested a hypothesis of social change relative to the arrival of Europeans by studying burial data from Kiwulan, an Iron Age site in northeastern Taiwan. The results indicate a transition among the burials from network ties based on ritual objects to wealth objects, and a more centralized structure with increased social differentiation after the European presence was established in the 17th century. Our case study demonstrates the effectiveness of Bayesian network analysis for archaeological data, and expands the use of burials in understanding the impacts of colonial presence on Indigenous groups in a pericolonial context.

Now it is your turn

Have a go at linking your repository with Zenodo

Instructions are in the shared document

Or try adding a CITATION.cff file

Using project boards
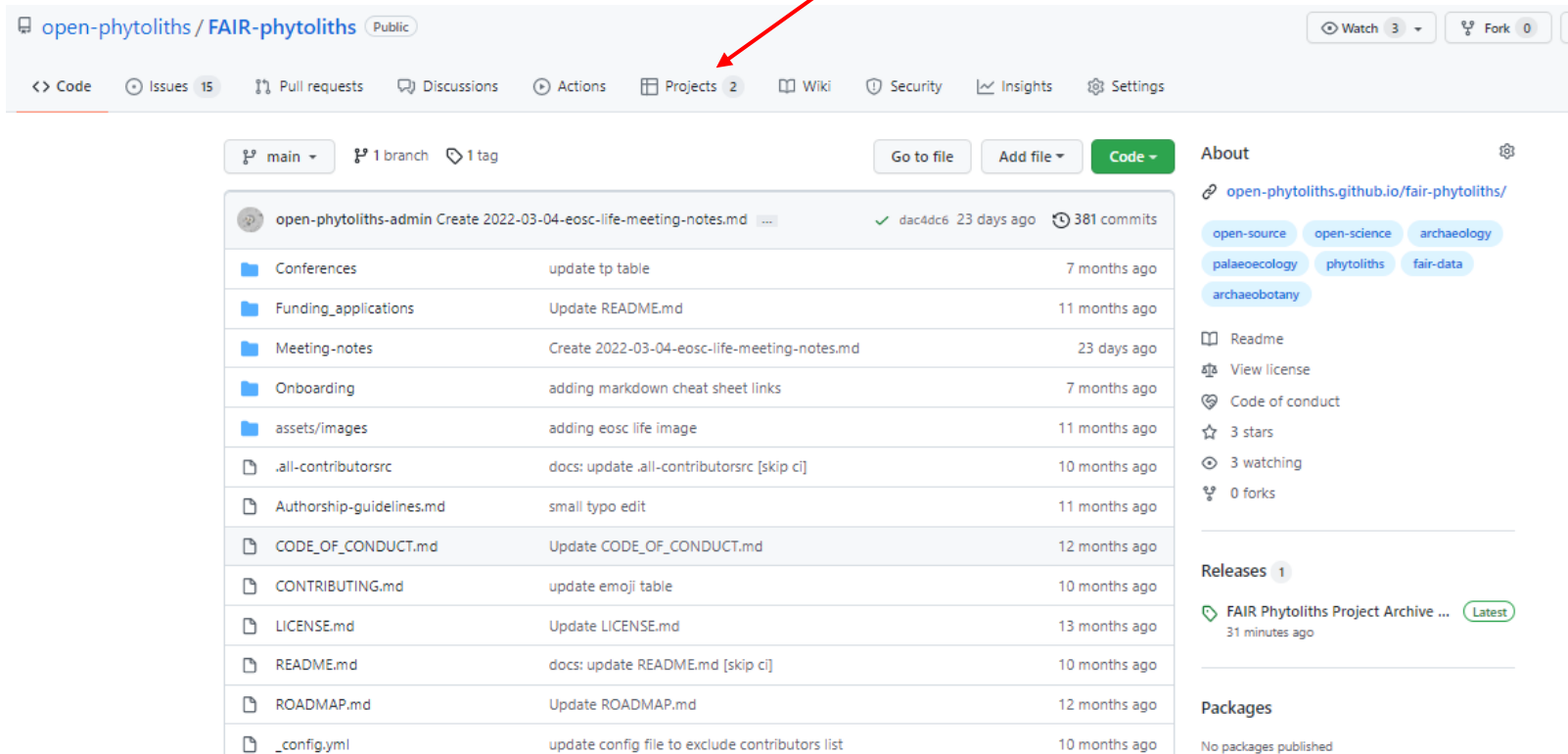
What are project boards?
● They are project management tools
● make to do lists
● collaborate with your team
● track your project
● measure your projects progress

Where to start

Click projects at the top

open-phytoliths / **FAIR-phytoliths** Public

◎ Watch 3 ⌄ | ⅄ Fork 0

<> Code ⊙ Issues 15 ⅃↥ Pull requests ⬭ Discussions ⊙ Actions ⊞ Projects 2 ⊞ Wiki ⊘ Security ⩘ Insights ⚙ Settings

⅄ main ⌄   ⅄ 1 branch   ⬭ 1 tag   Go to file   Add file ⌄   Code ⌄

open-phytoliths-admin Create 2022-03-04-eosc-life-meeting-notes.md ...   ✓ dac4dc6 23 days ago   ⊙ 381 commits

📁 Conferences	update tp table	7 months ago
📁 Funding_applications	Update README.md	11 months ago
📁 Meeting-notes	Create 2022-03-04-eosc-life-meeting-notes.md	23 days ago
📁 Onboarding	adding markdown cheat sheet links	7 months ago
📁 assets/images	adding eosc life image	11 months ago
📄 .all-contributorsrc	docs: update .all-contributorsrc [skip ci]	10 months ago
📄 Authorship-guidelines.md	small typo edit	11 months ago
📄 CODE_OF_CONDUCT.md	Update CODE_OF_CONDUCT.md	12 months ago
📄 CONTRIBUTING.md	update emoji table	10 months ago
📄 LICENSE.md	Update LICENSE.md	13 months ago
📄 README.md	docs: update README.md [skip ci]	10 months ago
📄 ROADMAP.md	Update ROADMAP.md	12 months ago
📄 _config.yml	update config file to exclude contributors list	10 months ago

About ⚙

🔗 open-phytoliths.github.io/fair-phytoliths/

open-source open-science archaeology

palaeoecology phytoliths fair-data

archaeobotany

⊞ Readme
⚖ View license
🏵 Code of conduct
☆ 3 stars
◎ 3 watching
⅄ 0 forks

Releases 1

🏷 FAIR Phytoliths Project Archive ... Latest
31 minutes ago

Packages

No packages published

36

Types of projects

- Kanban boards
- Beta - more like spreadsheets

Kanban boards

- Milestones
- Issues
- Tasks
- Can also link in pull requests
- Automation

A look at milestones and issues

Issues

Beta projects - project tables

Project tables are spreadsheet-like views where each row is a real or draft issue.

Any questions?

We have covered a lot today so are there any questions?

Other useful things

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Connect RStudio to Git and GitHub

- [WORCS, Workflow for Open Reproducible Code in Science](#) (longer presentation involving the [broader context that WORCS fit in here](#))
- https://happygitwithr.com/rstudio-git-github.html
- [How to Use Git/GitHub with R](#)
- https://github.com/jstbcs/ReproducibleWorkflowWorkshop

How to set up Git to work with RStudio

Basic steps to take:
1. Sign up for a Github account.
2. Install Git on your computer and install RStudio if you don't already have it!
3. Configure git to work with your Github account.
4. Make a repository in Github and press the green code button, then copy the HTTPS.
5. In R studio, start a new project with version control, click git and then paste in the link from github.
6. Now you can work with a git workflow using the git tab in the top right of the interface. Make changes, commit changes, pull from Github and then push to Github.

Instructions in more detail:
● https://kbroman.org/github_tutorial/pages/first_time.html
● https://happygitwithr.com/big-picture.html

Sharing your repo during anonymous peer review

The 5 Best Anonymous File Sharing and Hosting Sites

Create a View-only Link for a Project (using the Open Science Framework)

Anonymous GitHub

Useful GitHub resources

Useful GitHub resources (based on https://github.com/alan-turing-institute/the-turing-way/blob/master/workshops/github-workshop/2021-05-13-intro-workshop.md)
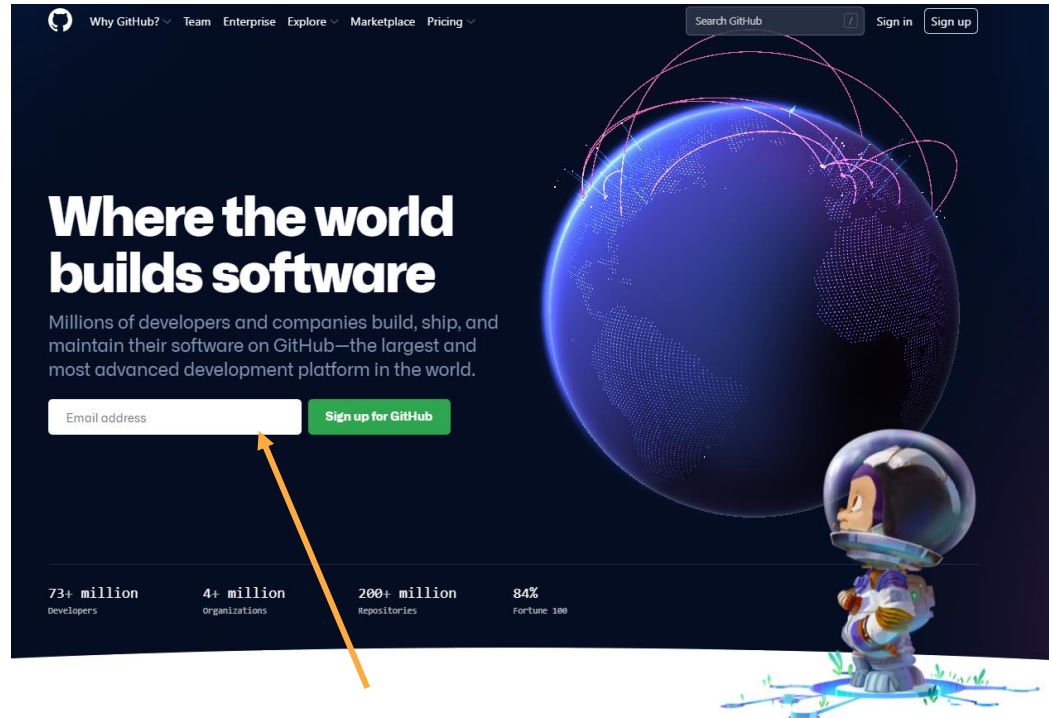
- [GitHub for Collaboration (from Mozilla)](#)
- [Understanding the GitHub workflow](#)
- [A Friendly Github Intro Workshop (from Danielle Robinson)](#)
- [GitHub help](#)
- [Oh Shit, Git!?!](#)
- [Try Git](#)
- [Git book](#)
- [GitHub glossary](#)
- [Writing on Github](#)
- [Markdown Cheatsheet](#)
- [Git workflow](#)

Go to github.com

Step 1: Sign-up

Step 2: Log in

Enter your email address here and click green button