The Alan Turing Institute

Git Good: Using Github for Collaboration in Open Source Communities

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Anne Lee Steele, Esther Plomp

Introductions

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Research Application
Manager
Alan Turing Institute
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The Turing Way

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Community Manager
Alan Turing Institute
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Delft University of
Technology, TNW.
Core Contributor
The Turing Way

Overview

1. What is *The Turing Way*?

2. Github Workshop

3. Contributing to *The Turing Way*
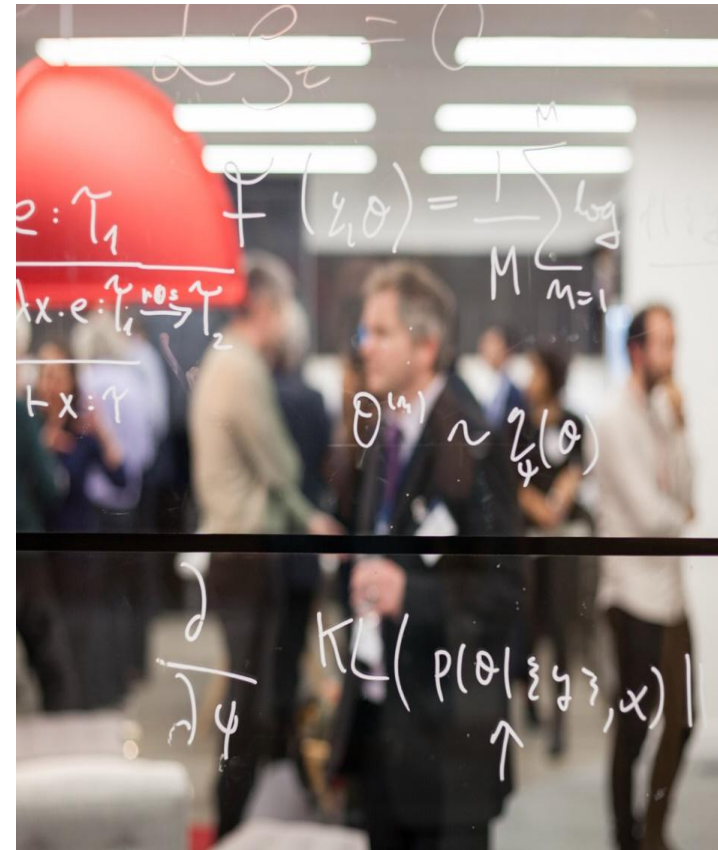
4. Celebrations

Overview

1. **What is *The Turing Way*?**

2. Github Workshop

3. Contributing to *The Turing Way*

4. Celebrations

The Alan Turing Institute

Established in 2015 as the National Institute for Data Science and AI

- Advanced world-class research and apply it to real-world problems
- Train the leaders of the future
- Lead the public conversation
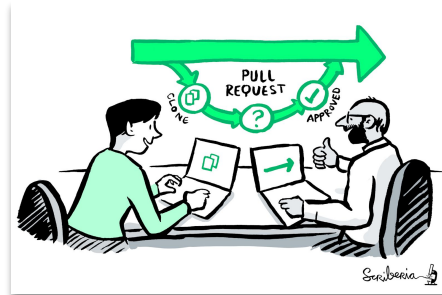
The Turing Way

An Open Source guide on Data Science

We involve and support a diverse community to make data science reproducible, ethical, collaborative and inclusive for everyone
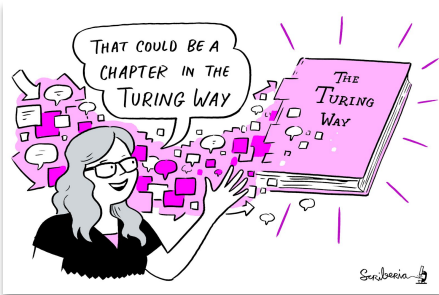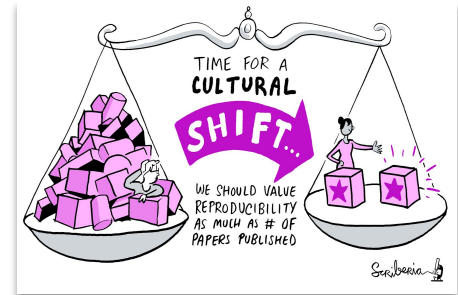

A Book

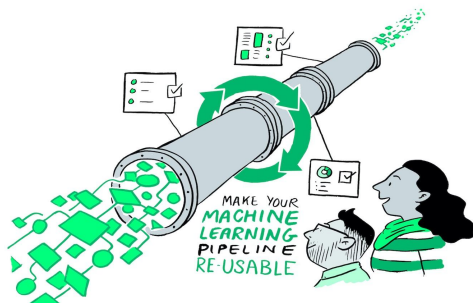A Global Community

An Open Source Project

A Culture of Collaboration

What is open source?

- Roots in free software movement
- Licensing allowed for modifications and derived works
- Developed into free and open source software (F/OSS) movement
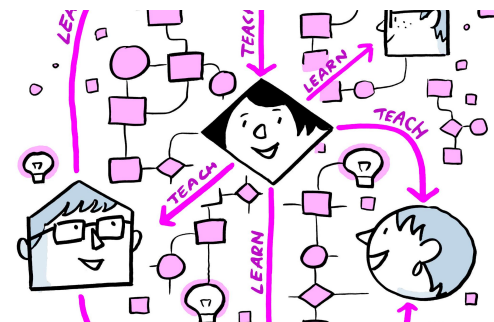- Influenced 'open' movements: open knowledge, open data, open access, open science
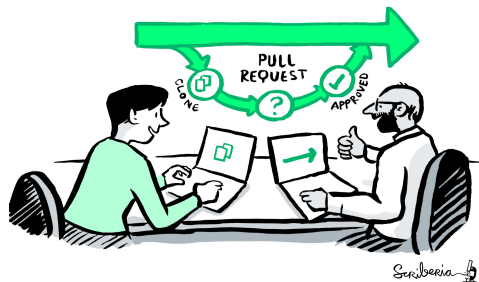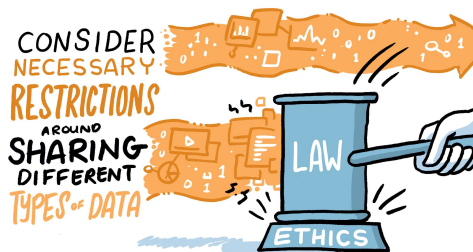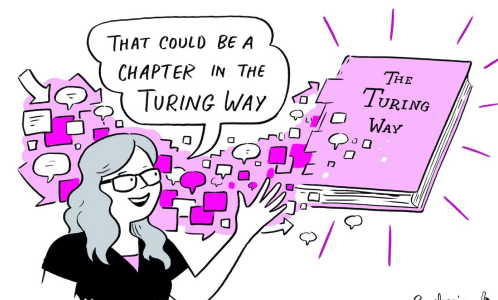
The Turing Way Guides

Reproducibility

Project Design

Communication

Collaboration

Ethical Research

Community Handbook

The Turing Way

Bringing people together

Inclusive work

Open source

THE TURING WAY

moz://a

Proposal by **Kirstie Whitaker** approved

Create README.md
KirstieJane committed on 1 Nov 2018

2019

2018

The Alan Turing Institute

Book launched with **10 members, 3 chapters**, many workshops, **2 Book Dashes**. Year ended with Several chapters by **67 contributors**

2020

Logo was designed with Scriberia

PROJECT DESIGN
COLLABORATION
REPRODUCIBILITY
COMMUNICATION & OUT REACH
the TURING WAY
ETHICS
TOO EASY NOT TO DO

Book Dash 2020,
Project expanded to **five guides**,
Community Handbook, social media,
Translation started. **238 contributors**.

Project growth, **134+ chapters** citation in peer reviewed articles, government reports and policies, new projects emerged as extension. **309 contributors**

Highly commended: *The Turing Way*, The Turing Way Community, The Alan Turing Institute

hidden REF

2021

YOUR PATH   YOUR STORIES
YOUR EXPERIENCE

250+ live chapters, 340+ contributors, 3000+ Twitter followers, 3000+ monthly visitors of the five guides.

2 project leads, a community manager, 10+ part paid staff, volunteer members, 4 translation and localisation leads.

2022

How we practice collaborative open source

Tools
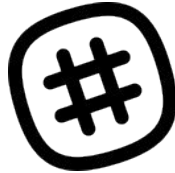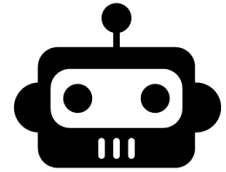
Practices

Systems

The Turing Way: Tools

Open Knowledge Management

Community engagement

Publication & citation

Acknowledgement

The Turing Way: Practices

Community support

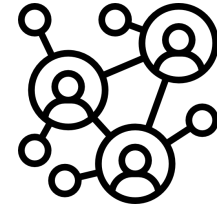**Review & Verification**

Maintenance

Localisation

The Turing Way: Systems

Open Research infrastructure

Community infrastructure

Network infrastructure

The Turing Way: Systems

Open Research infrastructure

Community infrastructure

Network infrastructure

Key Practices for Collaboration

Develop & share

Maintain & improve

Share resources

Review and update

Make it global

Share best practices

Key Practices for Collaboration

MENTORED CONTRIBUTIONS

REAL TIME INTERACTIONS WITH EXPERIENCED CONTRIBUTORS

EMPOWERING NEW CONTRIBUTORS

FIXING LINKS

LINK

LINK

Develop & share

Maintain & improve

Share resources

PULL REQUEST

Review and update

Make it global

WORKING

PROJECT MGMT
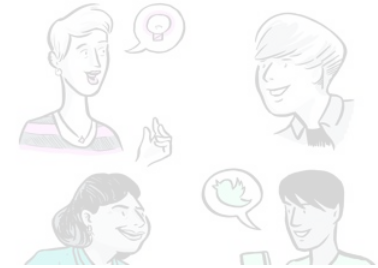
PROJECT DESIGN

Share best practices
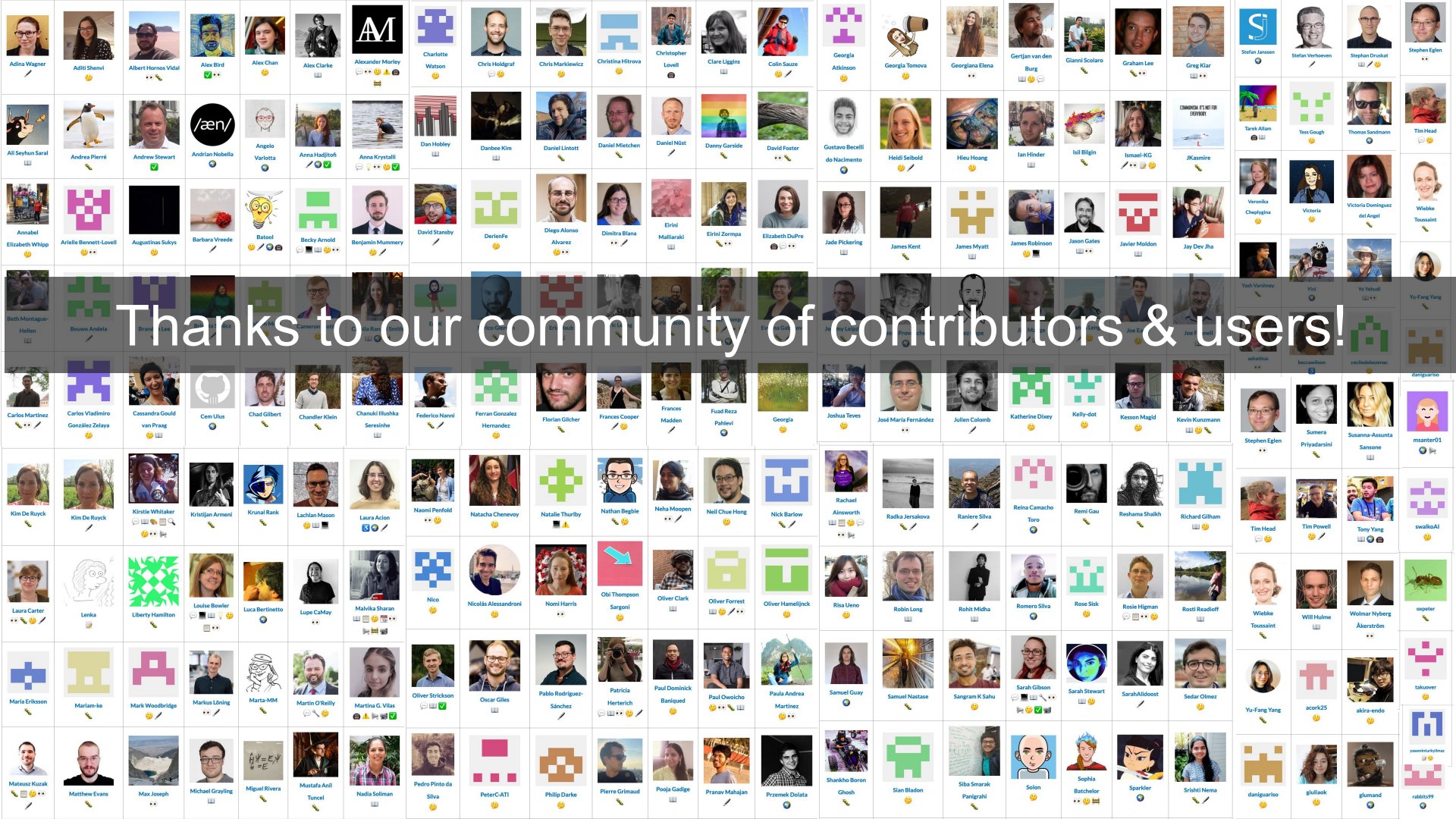
Thanks to our community of contributors & users!

PAUSE!!!

Any questions?
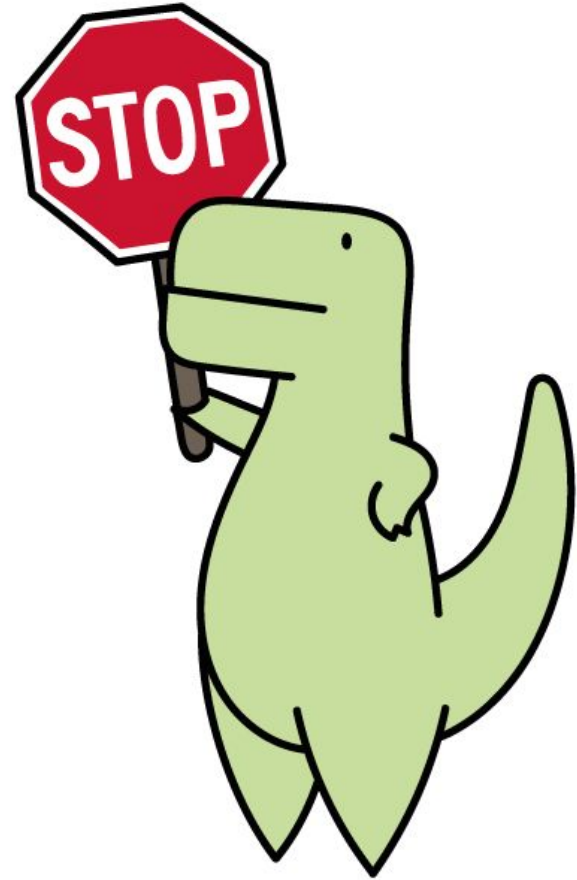
LoofandTimmy.com

Overview

Let's Git Good:

– Why use GitHub?

– What is GitHub?

– **Exercise**: creating a repository

– Writing in Markdown

– **Exercise**: editing a GitHub page and making a PR

– **Exercise**: Contribute to *The Turing Way*!
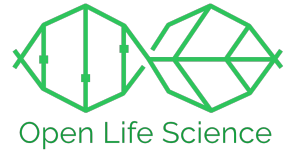
Why use GitHub within your community?

–   Collaborative documentation

–   Version Control

–   Transparency & accountability

–   Attribution for contributions

–   Project management

Collaborative Documents

There are challenges in developing collaborative documents...

Collaborative Documents

There are challenges in developing collaborative documents…

-   Asynchronous and conflicting edits, location, time zones, and **VERSIONS**!
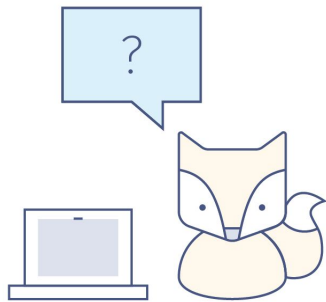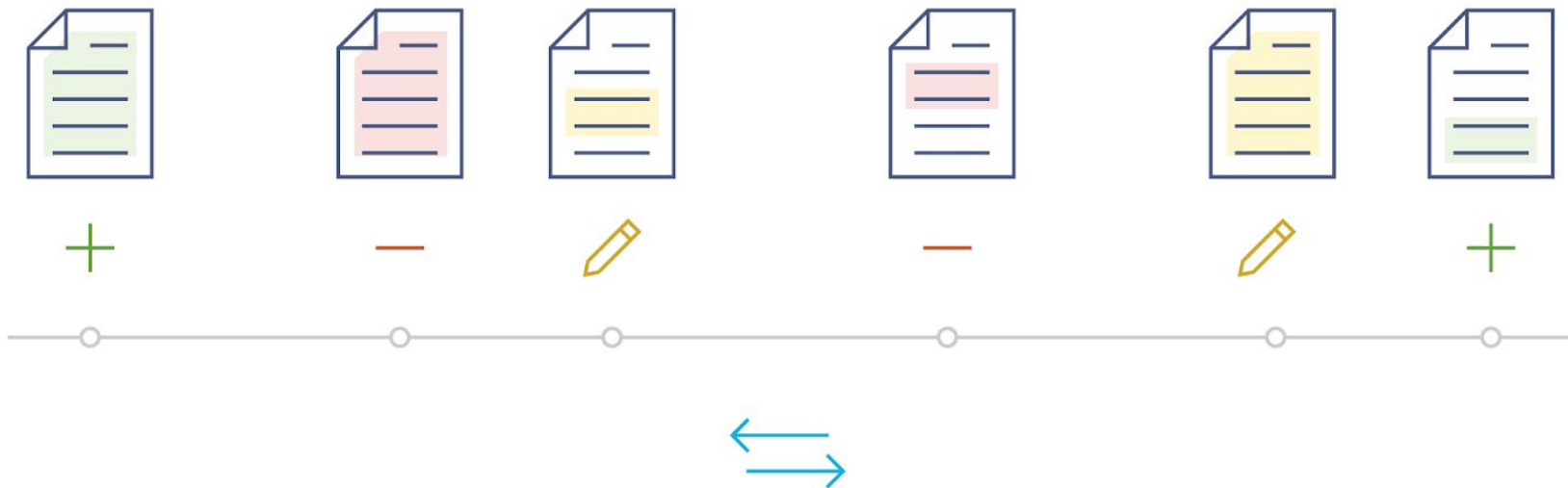
work-copy.js   work-copy-filter.js   work-copy-count.js

VERSION CONTROL

Images from Mozilla Science Lab, Illustration by Scriberia and The Turing Way

Revisions and Versions

Images from Mozilla Science Lab, Illustration by Scriberia and The Turing Way

Slide by Sophia Batchelor, https://zenodo.org/record/5070361

Collaboration on GitHub

GitHub
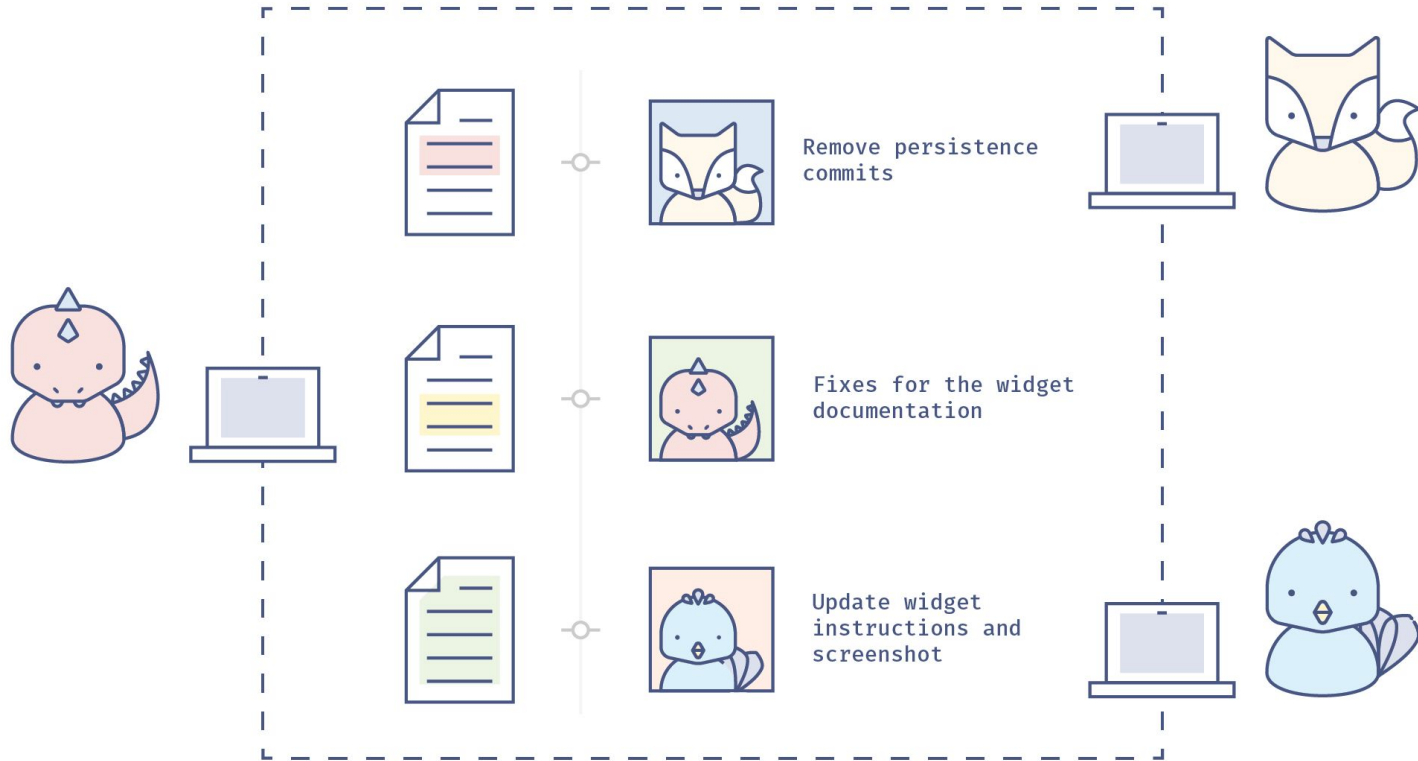
- **hosts your repositories** (projects) online

- helps you **work with contributors**/collaborators

- provides **web interface** for version control

- it can be used for **project management** and communication

- useful for any project where a group of people are working together

GitHub Exercise 1.

Let's dive in and set up our first repo…

PAUSE!!!

Do you have a GitHub Account?

Go to https://github.com/

- Create an account using the sign up
- Login

Slide by Sophia Batchelor, https://zenodo.org/record/5070361
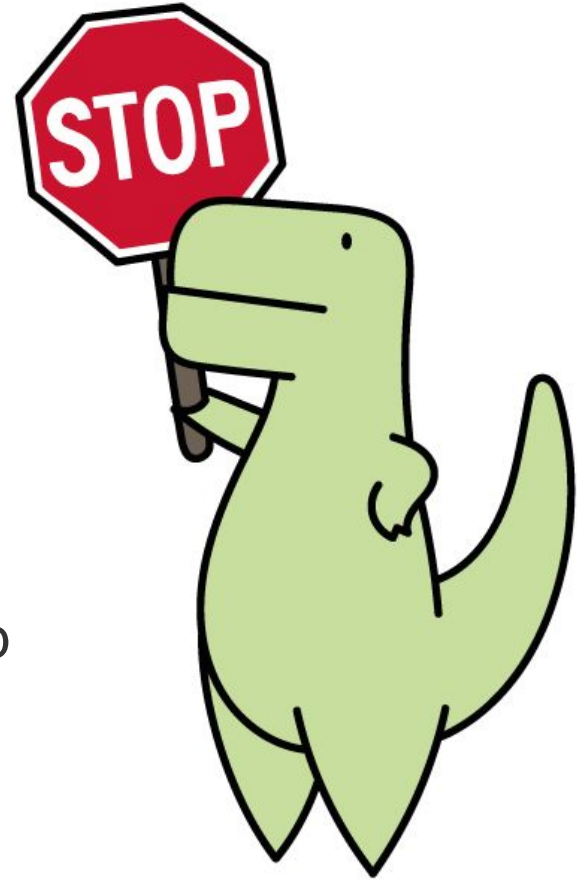
PAUSE!!!

Make sure your GitHub username is

in the EtherPad:

https://pad.carpentries.org/cc2022-git-good

LoofandTimmy.com
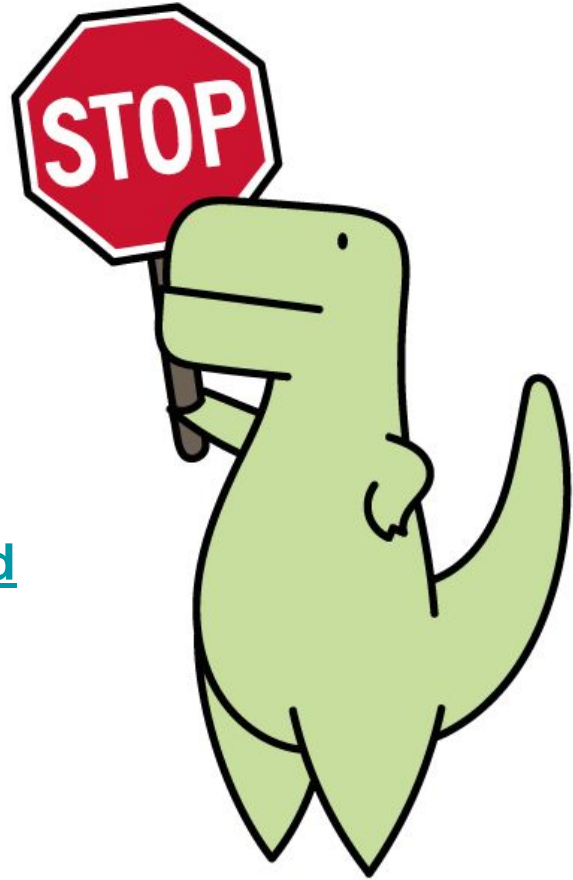
Creating a **Repo**.

Repository (Repo)

A project where all your files are, online or on your computer

Create a new repository

A repository contains all project files, including the revision history. Already have a project repository elsewhere? Import a repository.

Repository template
Start your repository with a template repository's contents.

No template ▾

Owner *   **Repository name** *

🧑 BrainonSilicon ▾ / trial-repo ✓

Great repository names are s[trial-repo is available.] Need inspiration? How about **potential-broccoli**?

Description (optional)

⦿ 🖥 **Public**
Anyone on the internet can see this repository. You choose who can commit.

○ 🔒 **Private**
You choose who can see and commit to this repository.

Initialize this repository with:
Skip this step if you're importing an existing repository.

☐ **Add a README file**
This is where you can write a long description for your project. Learn more.

Add .gitignore
Choose which files not to track from a list of templates. Learn more.

.gitignore template: None ▾

Choose a license
A license tells others what they can and can't do with your code. Learn more.

License: None ▾

ⓘ You are creating a public repository in your personal account.

Create repository

Creating a **Repo**.

"trial-repo" ➞

Repository (Repo)

A project where all your files are, online or on your computer

---

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Repository template
Start your repository with a template repository's contents.

[No template ▾]

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[🧑 BrainonSilicon ▾] / [trial-repo ✓]

Great repository names are s[trial-repo is available.] Need inspiration? How about **potential-broccoli**?

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[   ]

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[.gitignore template: None ▾]

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A license tells others what they can and can't do with your code. Learn more.

[License: None ▾]

ⓘ You are creating a public repository in your personal account.

[**Create repository**]

Markdown (.md) for formatting

Markdown is a simple text "markup" language made for quickly writing formatted text

Great for blogs, documentation, and even writing papers.

You may have used it in HackMD.

Markdown (.md) for formatting

Create a README file

- Landing page for your repo

- Information about your project

- List tasks of varying expertise clearly

- Add names/ids of your collaborators

- Invite others with specific skills

…let's write it in style with Markdown

GitHub Exercise: Creating a **README**

Write whatever you would like!

- About the project
- Today's date
- A hello world message!

…remember to title your file README.md to indicate the markdown file type.
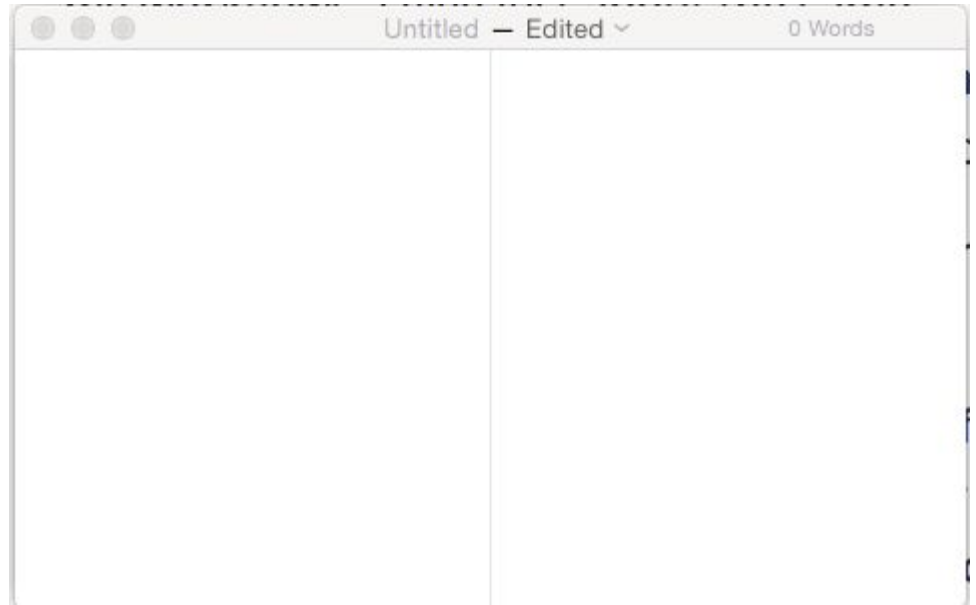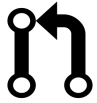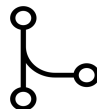
CONGRATS!!

You created your first repo.
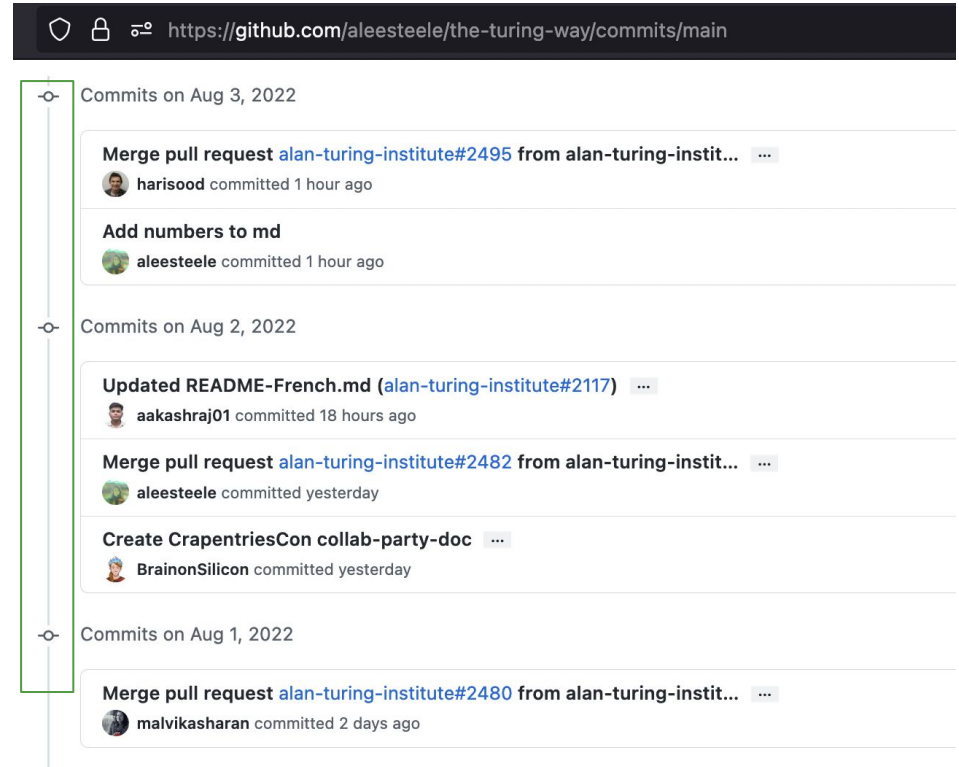
GitHub Vocab

- Commit
- Branch & Fork
- Pull request
- Merge

Commit ⦿

Saving a version of file(s)

- 'commit' changes with message (i.e.'My first commit')

Branch & Fork

- **Branch**: pointers to a specific commit in **your** repo, temporary places to work through a feature ← you have **write** access

Branch & Fork ⑂

- **Branch**: pointers to a specific commit in **your** repo, temporary places to work through a feature ← you have **write** access

- **Fork**: copy of repo that is an entirely **independent repo** ← no need of write access or intent to merge with the main
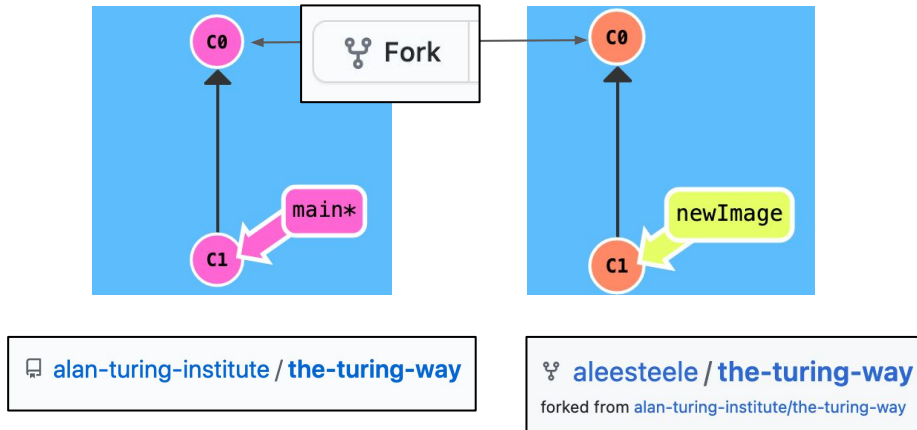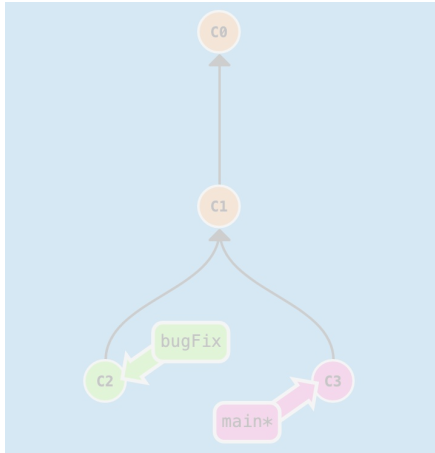
Fork & Pull Request.

If you don't own a repo and aren't an official collaborator:

    a. you will **Fork a repo**
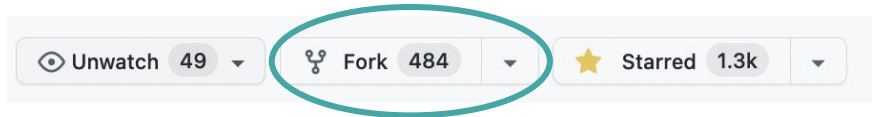
    b. work on your forked copy of the repo

    c. *make a Pull Request for the changes you've made*

    d. *author/owner will decide to merge them in.*

    e. Make friends + Big party!

Pull Request & Merge

Pull request
<u>request</u> to add your changes from a
branch back into main.

Merge
<u>act</u> of incorporating new changes
(commits) from one branch to another.
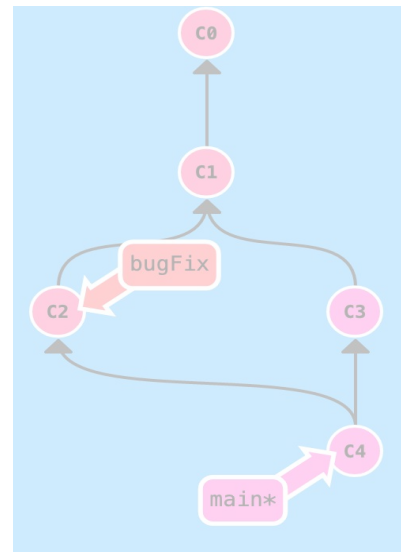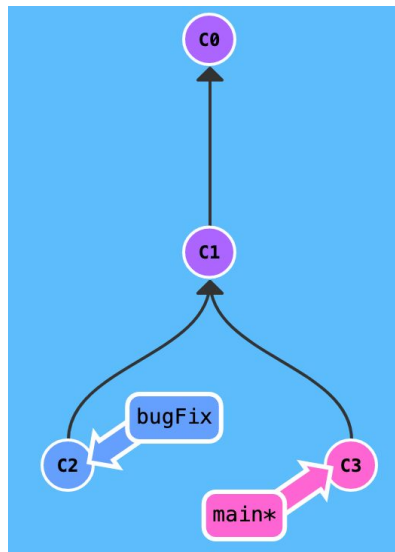
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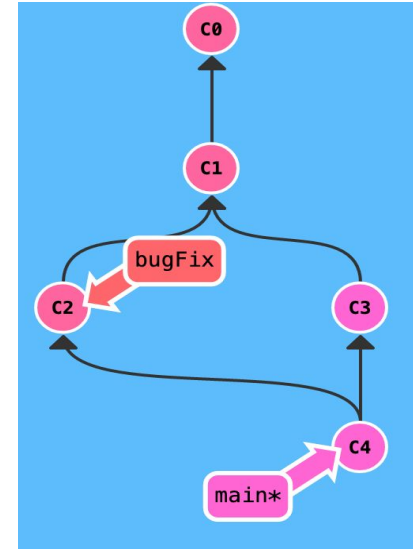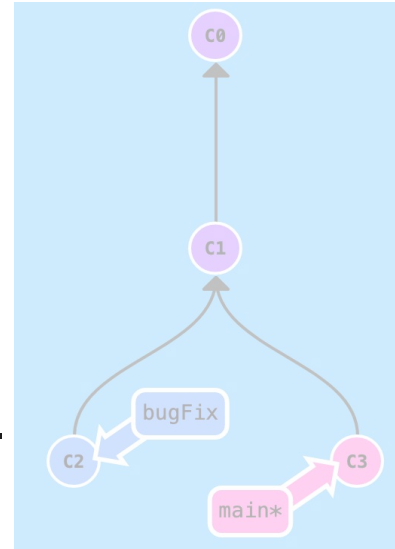
Pull Request (PR) - 1

Task 1: Edit the file with your details and create a new branch.

the-turing-way / workshops / github-workshop / 2022-08-04-carpentriescon.md

Git Good Workshop: CarpentriesCon 2022

About

This is a repo for our awesome collaboration workshop called "Git Good" 🎉

Edit this file

Raw   Blame   🖥   ✏️   🗑

```
## Add your name here
1. Anne Lee Steele
2.
3.
4.
5.
6.
7.
8.
9.
10.
```
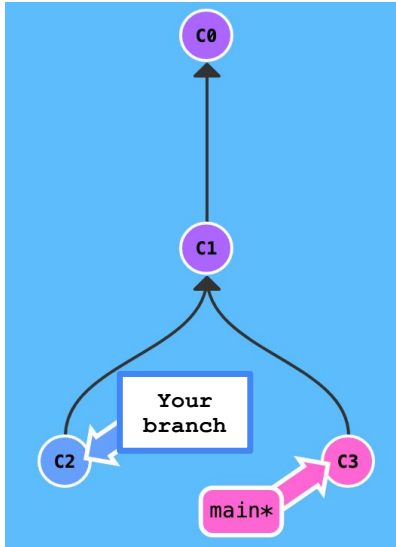
Pull Request (PR) - 2

Task 2: Submit a Pull Request of your branch to main.

GitHub Exercise 2.

Let's edit a page and submit a
Pull Request (PR).

PAUSE!!!

Any questions?
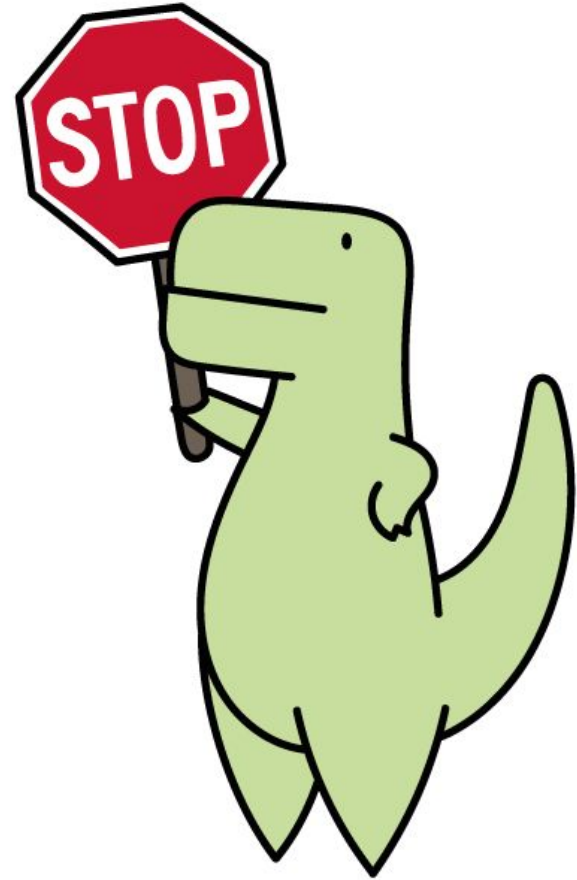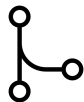
LoofandTimmy.com

Merge

- **Merge**: combining the work from two different branches together after review
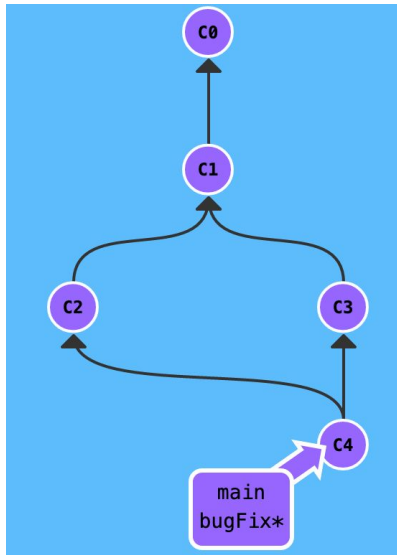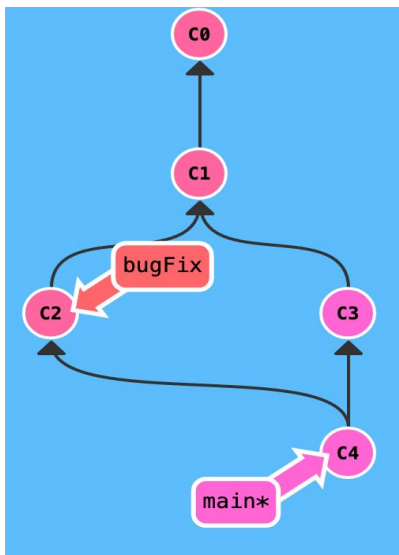
CarpentryCon: Sample Pull Request #2497

Open aleesteele wants to merge 1 commit into main from aleesteele-patch-2

Conversation 1   Commits 1   Checks 7   Files changed 1

aleesteele commented 9 minutes ago · edited ▾   Member

- Sample pull request for CarpentryCon workshop
- Corresponds to slide 48

Conversation 1   Commits 2   Checks 13   Files changed 1

Merge

- **Merge**: combining the work from two different branches together after review
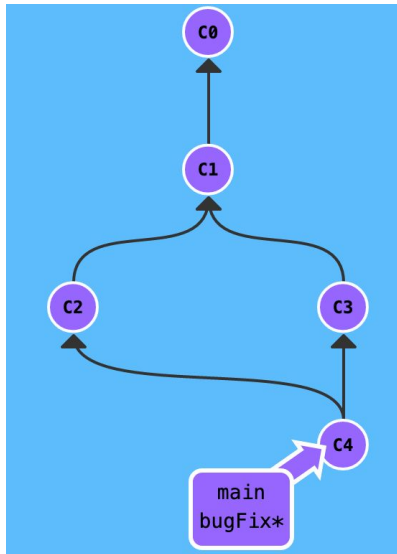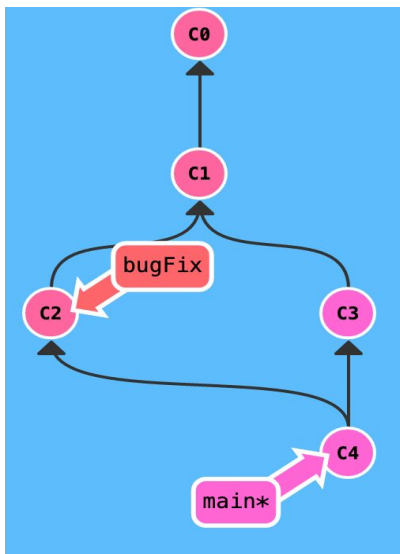
CarpentryCon: Sample Pull Request #2497

⇅ Open aleesteele wants to merge 1 commit into `main` from `aleesteele-patch-2`

💬 Conversation 1 | ⊶ Commits 1 | ☑ Checks 7 | ± Files changed 1

aleesteele commented 9 minutes ago · edited ▾   Member

- Sample pull request for CarpentryCon workshop
- Corresponds to slide 48

💬 Conversation 1 | ⊶ Commits 2 | ☑ Checks 13 | ± Files changed 1

---

workshops/github-workshop/2022-08-04-carpentriescon.md

```
@@ -3,6 +3,8 @@
3   3   ## About
4   4   This is a repo for our awesome collaboration workshop called "Git Good" :tada:
5   5
    6 + The link to this page can be found here: https://github.com/alan-turing-institute/the-turing-way/blob/main/workshops/github-workshop/2022-08-04-carpentriescon.md
    7 +
```

Review: Demo ☀️

Users with write access can approve and merge PRs
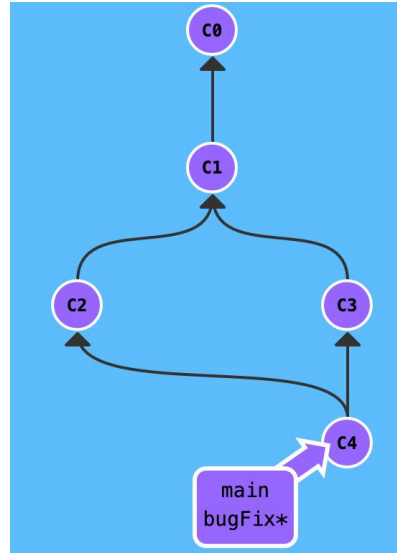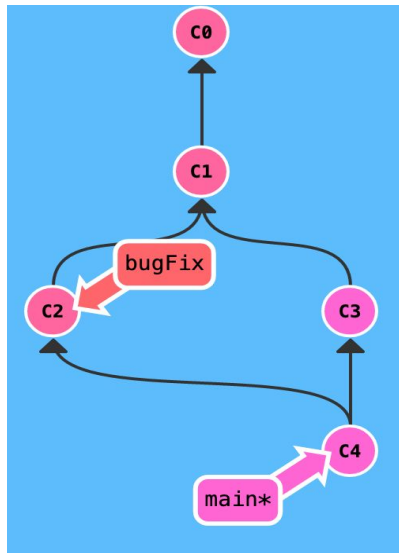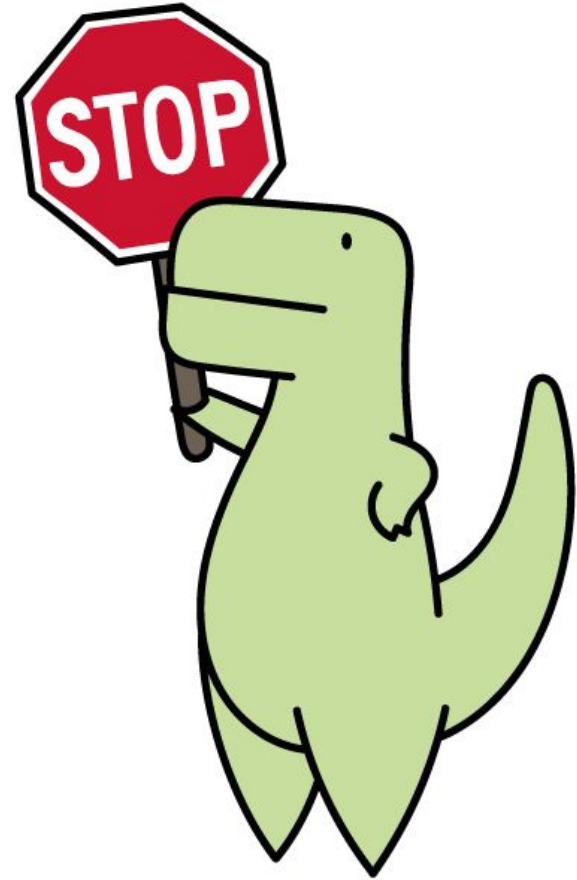
PAUSE!!!

Any questions?

Let's Take a Break
See you in 05:00 Minutes
https://cuckoo.team/ttw-carpentrycon

PAUSE!!!

MERGE CONFLICT!!

LoofandTimmy.com
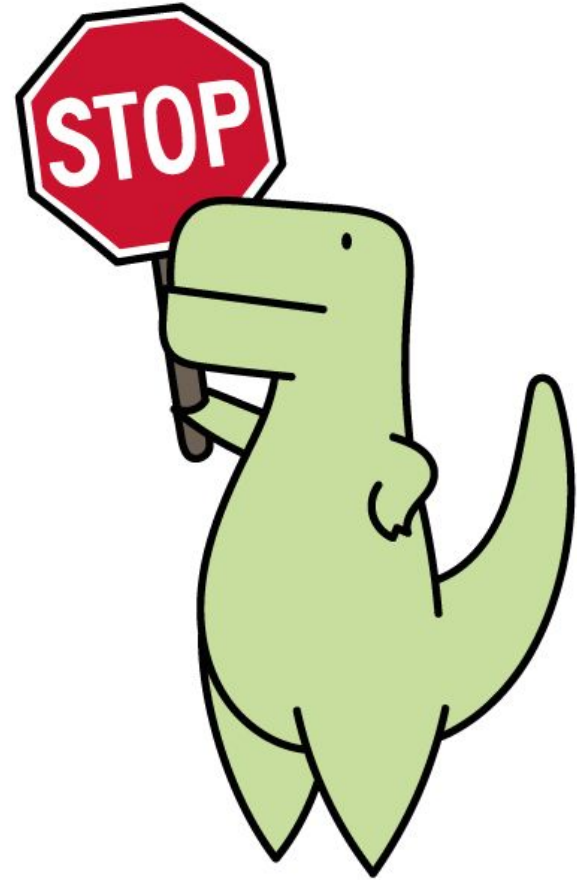
What we've done so far…

- Introduction to using Github
  - Collaborative Documentation
  - Version Control, Git
  - Markdown format
  - Commit, Branch & Fork, Pull Request, Merging and Merge conflict.
- Making your first repository
- Merged your first pull request! 🚀

Overview

You should have received an invite to the repository!

It's *hard work*!

What is your experience with contributing to open source projects?

Issue vs Pull Request (PR)

- With a **issues**, you can **propose ideas for possible changes**, and invite discussions before you **make a PR** (or do something else).

- With a **pull request**, you can **propose changes**, discuss, and iterate on before you **merge** the changes into the project.
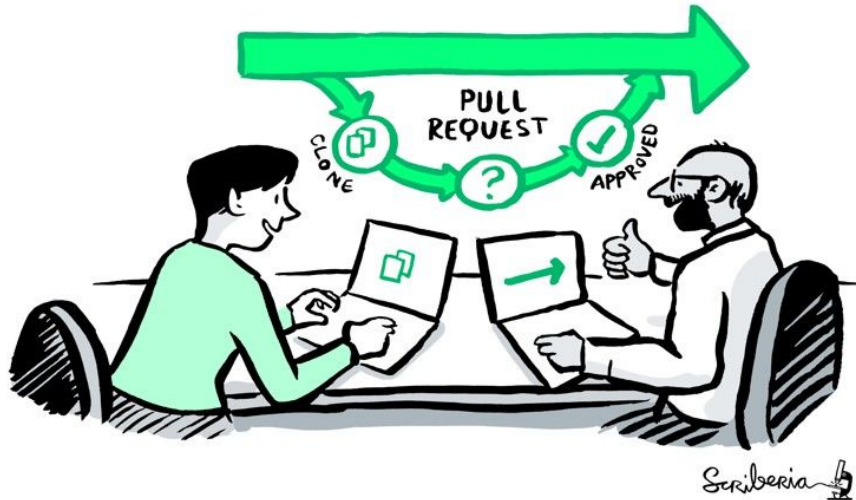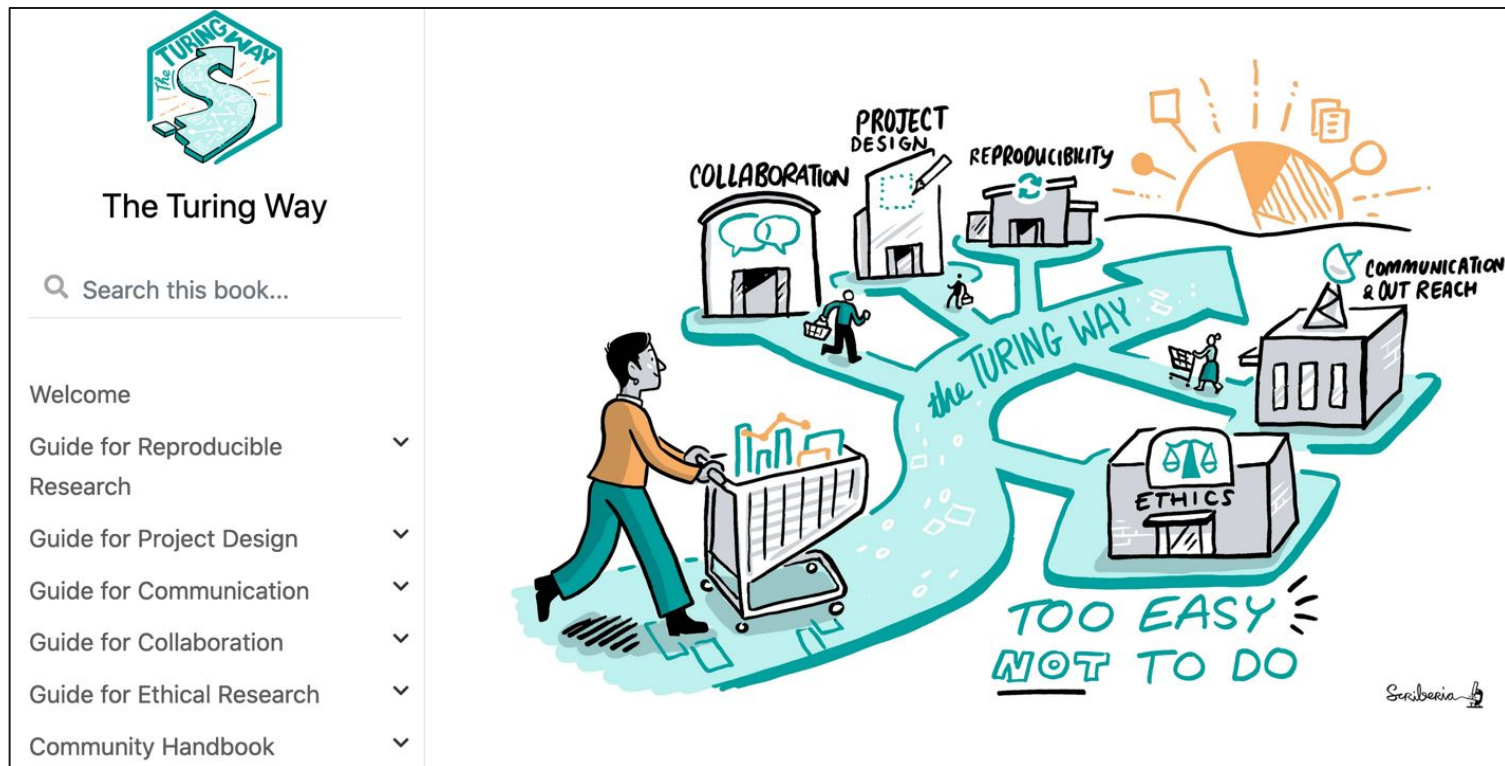
Using Issue & PR Features

- Different **contributors can see** what you are working on and offer help, share thoughts or learn from your work.

- Provide sufficient details, respond patiently, accept constructive feedback and **invite collaboration**.

Contributing to *The Turing Way*

The Turing Way: **Github Repository**

We will be editing this together!

The Turing Way: Github Repository

Community standards

Learn more about contributing to the project

Learn more about the project here

Community contributors

Contributing to *The Turing Way:* Issues

Contributing to *The Turing Way:* Making a Pull Request

'After the Book Dash' subchapter: update Gitter channel to Slack workspace #2494

Open · aleesteele opened this issue 4 hours ago · 0 comments

A Beginner's Guide to Contributing to *The Turing Way*

This is a guide for getting started with contributing to The Turing Way during CarpentryCon 2022. We're so glad to have you here! 🎉

Below you'll find some instructions for contributing to the project. If you have any questions, please let @aleesteele, @harisood, or @BrainonSilicon know on Zoom so that we can assist you.

Guide to Contribution

In the Book Dash Events subchapter, the link to the Gitter workspace needs to be updated to the Slack workspace.

1. Visit this part of the repository: https://github.com/alan-turing-institute/the-turing-way/blob/main/book/website /community-handbook/bookdash/bookdash-after.md

2. Search for statement:

   "Everyone is welcome to join our Gitter channel for informal discussions. "

3. Click 'Edit this file' to correct the wording.

Suggested Correction:

   "Everyone is welcome to join our Slack workspace for informal discussions."

4. Use Markdown format to correct the wording on the page:
   Everyone is welcome to join our [Slack workspace](https://theturingway.slack.com/) for informal discussions.

5. Click 'Preview' to check that the changes look the way you'd like them too!

6. Click on 'Propose changes': edit the title and the description of the issue to describe your update to the community.

7. Add a description of your pull request. Don't forget to tag this issue number using a # in the description. You can find the issue number next to the title of this issue (this one of ⊙ 'After the Book Dash' subchapter: update Gitter channel to Slack workspace #2494).

8. A reviewer will review your pull request, and ask you if you need make any changes before it can be approved.

9. There are a number of checks your project will undergo: to check for merge conflicts, inclusive language, and formatting issues. Wait until those checks are complete before merging.

10. Once your pull request is approved and the checks are complete, you can merge your change into the repository! ✅

Assignees
No one—assign yourself

Labels
carpentrycon22   good first issue

Projects
None yet

Milestone
No milestone

Development
Create a branch for this issue or link a pull request.

Notifications   Customize
Unsubscribe
You're receiving notifications because you're watching this repository.

1 participant

Lock conversation
Pin issue
Transfer issue
Convert to discussion
Delete issue

Propose changes

Update slack information + link

Add an optional extended description...

asteele@turing.ac.uk

Choose which email address to associate with this commit

○ You can't commit to main because it is a protected branch.

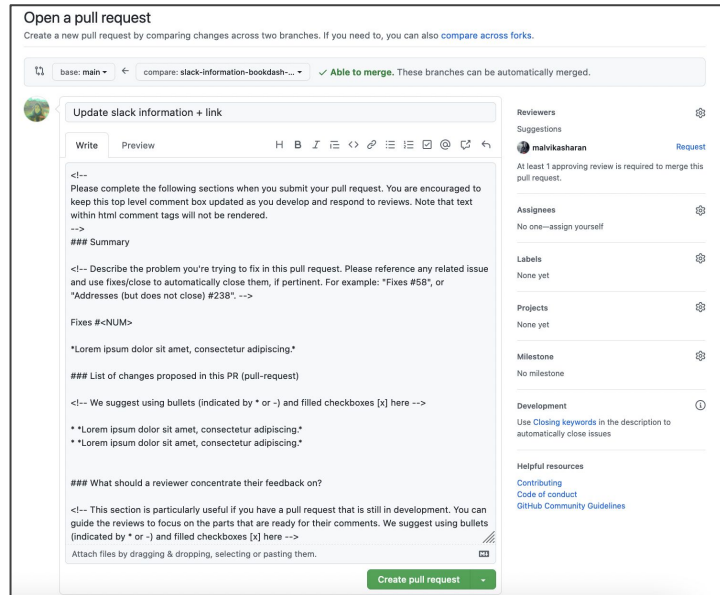● Create a new branch for this commit and start a pull request. Learn more about pull requests.

slack-information-bookdash-page

Propose changes   Cancel
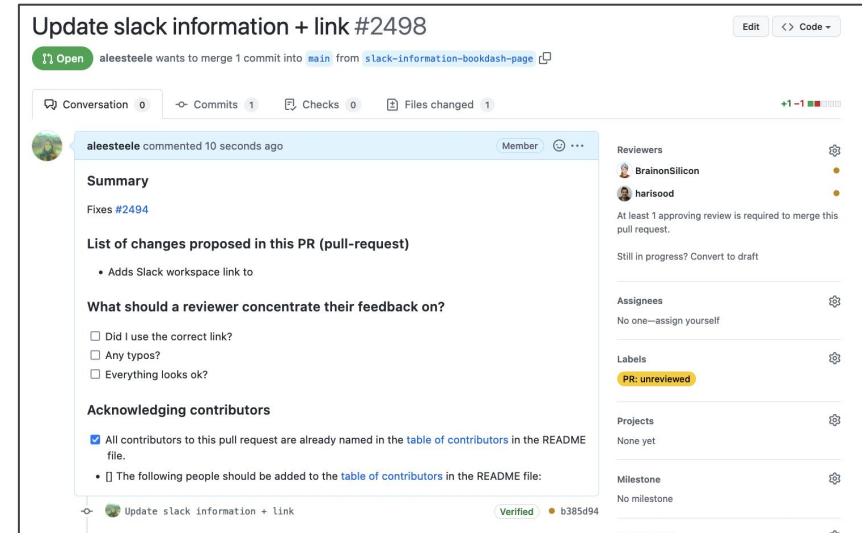
Issue

Propose Changes

Contributing to *The Turing Way:* Making a Pull Request

Draft Pull Request

Create Pull Request

Contributing to *The Turing Way:* Issues & Pull Requests

Review Pull Request

Merge changes!

Contributing to *The Turing Way:* DEMO!

Session 1:

https://github.com/alan-turing-institute/the-turing-way/issues/2494

Session 2:

https://github.com/alan-turing-institute/the-turing-way/issues/2493

PAUSE!!!

Any questions?

LoofandTimmy.com

Let's dive in!

- You'll each be added to a **breakout room in groups**: your breakout room number is on the etherpad
- There is **one issue** assigned to each room
- Have a go at resolving the issues! We'll be rotating through the rooms if you get stuck

If you finish early, feel free to find an issue you're interested in working on: and get started!

Tips for the breakout rooms:

- Add a comment to the issue with who is working on it (remember to add their Github usernames with an @ sign!)
- 1 person making the PR
- Link the associated issue

Main room: for anyone who missed a part of the workshop!

Overview

So you've learned how to contribute to an open source project…
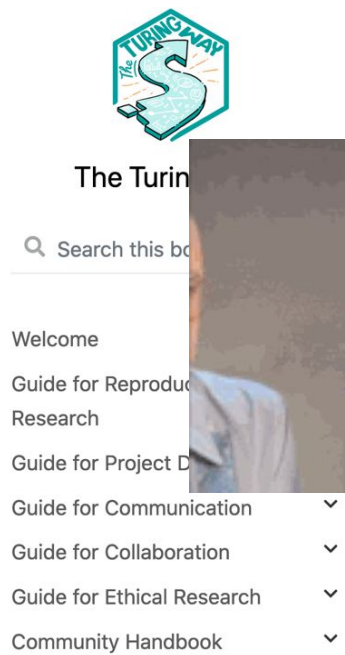
What we've accomplished

- Introduction to Github
- Made first repository!
- Contributed to *2 repositories!*
- Fixings bugs in *The Turing Way!*

🎉 Congratulations! 🎉

Next steps

- This week, we'll be reviewing your pull requests:
  - Tags for 'all-contributors' bot
  - Reviewing + accepting changes (and fixing any merge conflicts!)
  - Remember to login + accept your merge requests
- Adding you to the contributor table: https://github.com/alan-turing-institute/the-turing-way#contributors

Keep in touch with The Turing Way community!

Join a Community Event

- *Collaboration Cafes*
  – 1st & 3rd Wednesdays (14:00 UTC)
- *Coworking Calls*
  – Mondays (10:00 UTC)
- *Fireside Chats*
- *Book Dash*
- *Community Share-out*

bit.ly/turingway

Get involved with the community

- Slack workspace
- PR / Issue on Github
- Community events
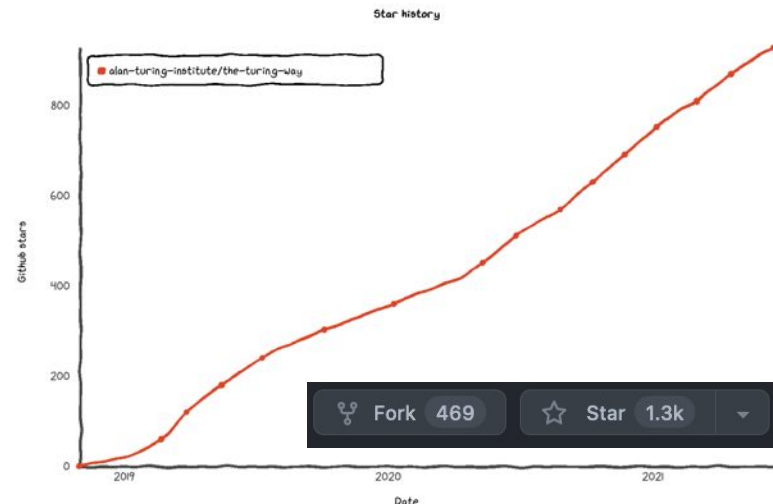
bit.ly/turingway

zenodo

8,921
👁 views

11,048
⬇ downloads

Acknowledgements:
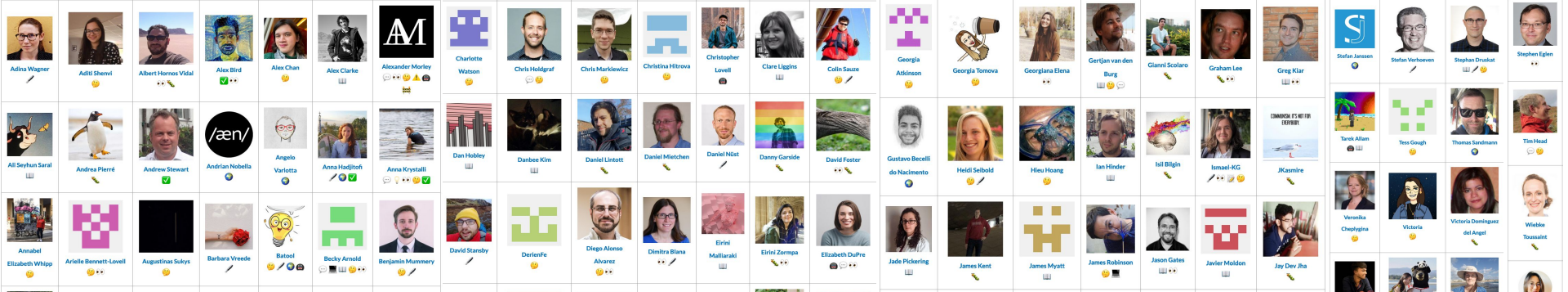
– Kirstie Whitaker, Malvika Sharan, *The Turing Way* community, friends & collaborators

– GitHub workshop based on <u>Friendly GitHub Intro by Kirstie Whitaker</u> & <u>GitHub Collaborating Document by Malvika Sharan</u>
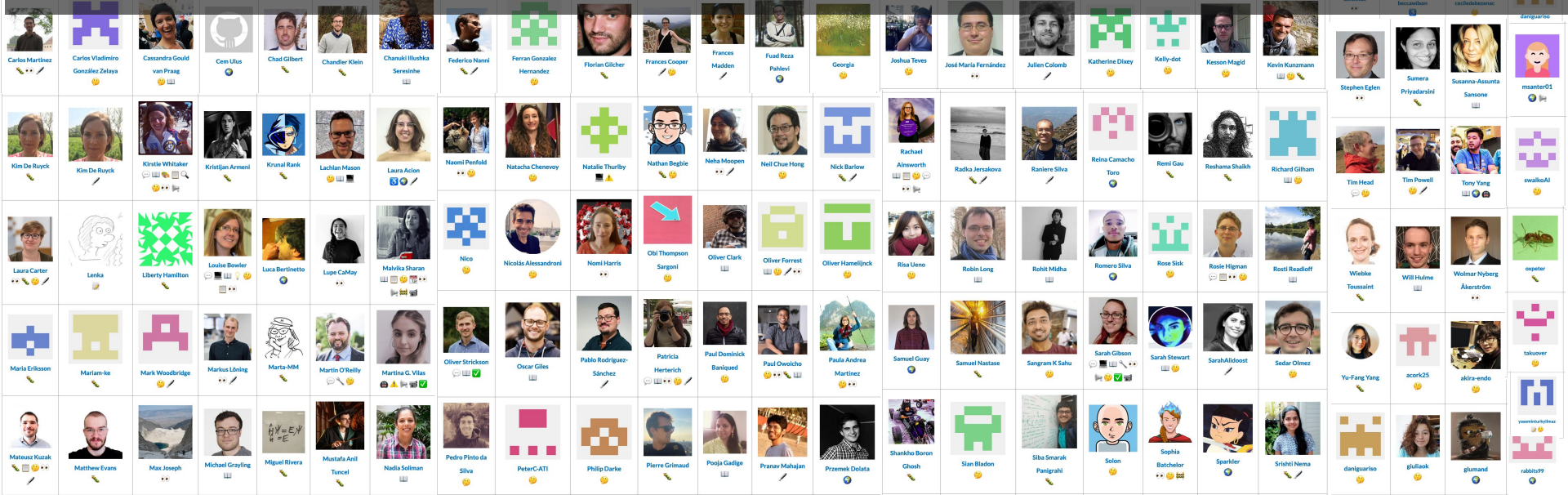
Stay in Touch

– Book: <u>the-turing-way.netlify.com</u>

– Join Slack: <u>https://tinyurl.com/jointuringwayslack</u>

– Twitter: <u>twitter.com/turingway</u>

– Newsletter: <u>tinyletter.com/TuringWay</u>

– Mastodon: <u>https://fosstodon.org/@turingway</u>

– GitHub: <u>github.com/alan-turing-institute/the-turing-way</u>

– Original artwork by Scriberia: <u>https://doi.org/10.5281/zenodo.3332807</u>

Contact us: <u>e.plomp@tudelft.nl</u>, <u>hsood@turing.ac.uk</u>, <u>sbatchelor@turing.ac.uk</u>, <u>asteele@turing.ac.uk</u>

Thanks to our community of contributors & users!

Key Practices for Collaboration

Develop & share

Maintain & improve

Share resources

Review and update

Make it global

Share best practices