

The Alan Turing Institute

Designing *The Turing Way* Guide to **Project Design**

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& Malvika Sharan

Pronouns: she/her



The Turing Way



An **Open Source** project that involves and supports its **diverse community** to make data science **reproducible, ethical, collaborative and inclusive** for you.



Book:
the-turing-way.netlify.app/

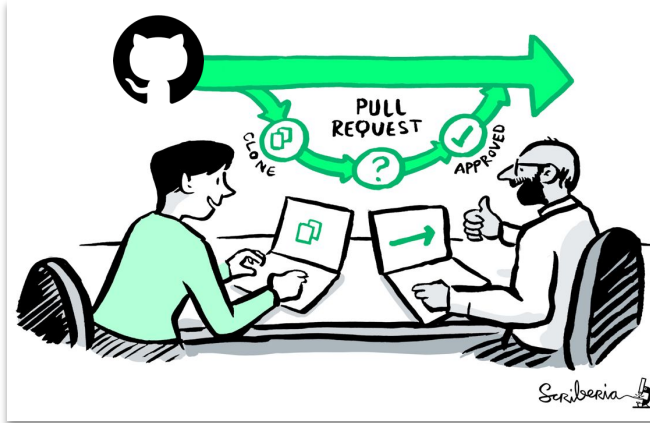
GitHub:
github.com/alan-turing-institute/the-turing-way

Twitter:
twitter.com/turingway

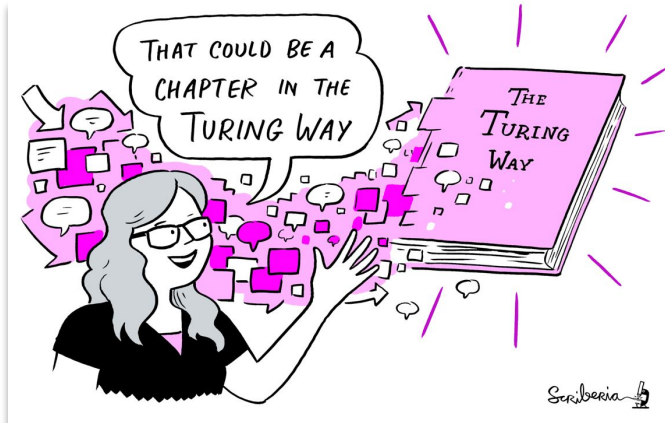
Email:
theturingway@gmail.com

CC-BY 4.0, *The Turing Way*

An Open Source Project



A Book



A Community



A Culture of Collaboration



📁 .github	Remove prettier configuration
📁 book	minor update
📁 communications	Fix typos
📁 conferences	Add KW formatting pedantry
📁 project_management	Update online-collaboration-cafe.md
📁 templates	Updating Github templates
📁 tests	Add "et cetera" as a deprecated Latinism
📁 workshops	Remove mis-pasted text



📄 .all-contributorsrc	Merge pull request #991 from alan-turing-institute/all-contributors/a...	5 days ago
📄 .gitignore	ignore pptx in workshop folder	9 months ago
📄 .travis.yml	add html-proof file again	last month
📄 <u>CODE_OF_CONDUCT.md</u>	her -> their	6 months ago
📄 <u>CONTRIBUTING.md</u>	Update CONTRIBUTING.md	2 months ago
📄 GOVERNANCE.md	Read through months later	5 months ago
📄 LICENSE.md	Fix typo in licence	2 months ago
📄 <u>README.md</u>	Merge pull request #991 from alan-turing-institute/all-contributors/a...	5 days ago
📄 book_skeleton.md	Update book_skeleton.md	13 months ago
📄 <u>contributors.md</u>	Add myself to contributors.md	11 months ago
📄 tips_and_tricks_survey.md	Update tips_and_tricks_survey.md	14 months ago
📄 ways_of_working.md	Adjust team contact section	5 months ago

- Open & collaborative
- CC-BY 4.0 License
- Hosted on GitHub

An open source project

- Everyone can freely read, reuse, distribute, modify and co-develop.
- The project belongs to *The Turing Way* community.
- Built on Open Source projects:
 - git, Jupyter Book, Netlify, Binder, bots etc.

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The Turing Way

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September 2, 2020 (0) Presentation Open Access View

Challenges in Assessing Contributions to Reproducible Research and Open Science

Sharan, Malvika

DORA Panel: Addressing Roadblocks in Research Assessment Reform Panel organiser and moderator: Helen Star Speakers: Malvika Sharan (presentation in this Zenodo deposit) with Elena Simakov, David Carr, Ulrich Dirnagl, Anne Letho, Serhii Nazarovets About the panel: Research evaluation

Uploaded on September 3, 2020

1 more version(s) exist for this record

August 11, 2020 (1) Presentation Open Access View

FSC2020 Lightening Talk: The Turing Way

Esther Plomp, Kirstie Whittaker

Lightening talk presented by Esther Plomp on the 3rd of August 2020 for the Force11 Scholarly Communication Institute (FSC2020). Reproducible research is necessary to ensure that scientific work can be trusted. By sharing data, analysis code and the computational environment used to generate the r

Uploaded on August 11, 2020

August 6, 2020 (1) Journal article Open Access View

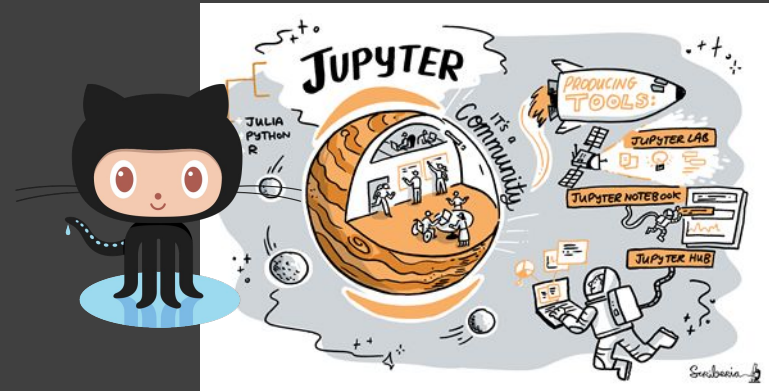
The Turing Way workshop on Boost your reproducibility with Binder

Sharan, Malvika

This workshop was organized with the UKDR team. Title: The Turing Way workshop on Boost your reproducibility with Binder Date: 11 June, 2020 13:00 - 17:00 (GMT) Instructors: Kirstie Whittaker, Sarah Gibson, Malvika Sharan Shared notes: <https://hackmd.io/@malvika/sharan/Binder-June2020> Agenda

Uploaded on August 6, 2020

Curated by: The Turing Way
Curation policy: Not specified
Created: March 19, 2019



Moonshot Goal: Reproducibility “too easy not to do”



The Turing Way

🔍 Search this book...

Welcome

- Guide for Reproducible Research
- Guide for Project Design
- Guide for Communication
- Guide for Collaboration
- Guide for Ethical Research
- Community Handbook
- Afterword

Visit our [GitHub Repository](#)

This book is powered by [Jupyter Book](#)

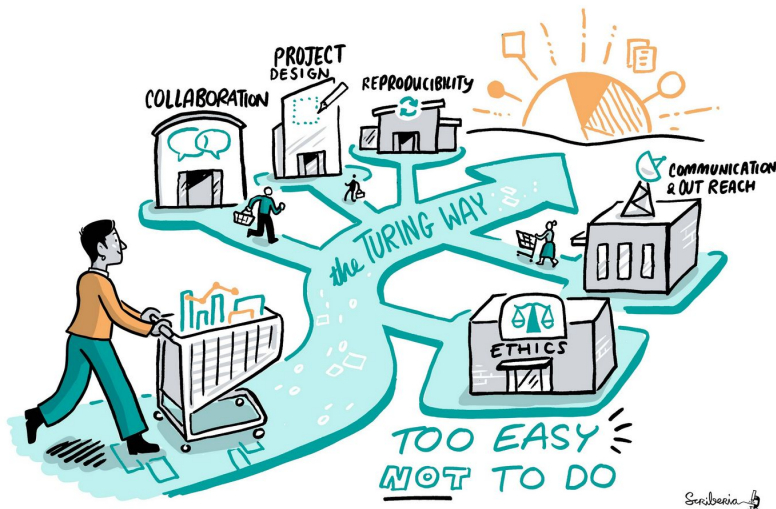
Welcome

The Turing Way is an open source community-driven guide to reproducible, ethical, inclusive and collaborative data science.

Our goal is to provide all the information that data scientists in academia, industry, government and the third sector need at the start of their projects to ensure that they are easy to reproduce and reuse at the end.

The book started as a guide for reproducibility, covering version control, testing, and continuous integration. However, technical skills are just one aspect of making data science research “open for all”.

In February 2020, *The Turing Way* expanded to a series of books covering reproducible research, project design, communication, collaboration, and ethical research.



Guide for Reproducible Research

Overview

Open Research

Version Control

Licensing

Research Data Management

Reproducible Environments

BinderHub

Code quality

Code Testing

Code Reviewing Process

Continuous Integration

Reproducible Research with Make

Research Compendia

Credit for Reproducible Research

Risk Assessment

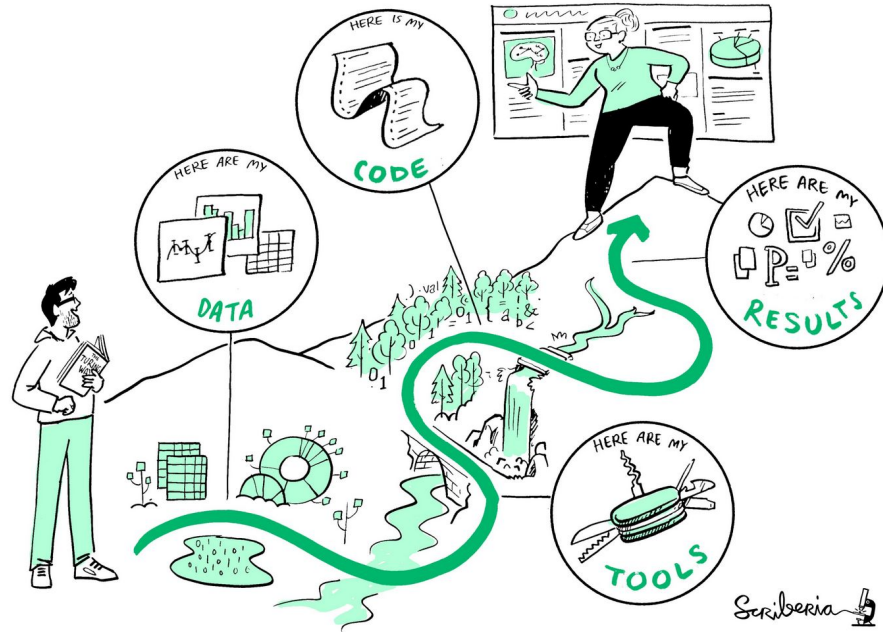
Case Studies

Guide for Reproducible Research

This guide covers topics related to skills, tools and best practices for research reproducibility.

The Turing Way defines reproducibility in data research as data and code being available to fully rerun the analysis.

There are several definitions of reproducibility in use, and we discuss these in more detail in the [Definitions](#) section of this chapter. While it is absolutely fine for us each to use different words, it will be useful for you to know how *The Turing Way* defines *reproducibility* to avoid misunderstandings when reading the rest of the handbook.



Guide for Collaboration

Getting Started With GitHub

Collaborating on GitHub

Maintainers and Reviewers
on GitHub

Managing a New Community
and Team

Leadership in Data Science

Remote Collaboration

Guide for Collaboration

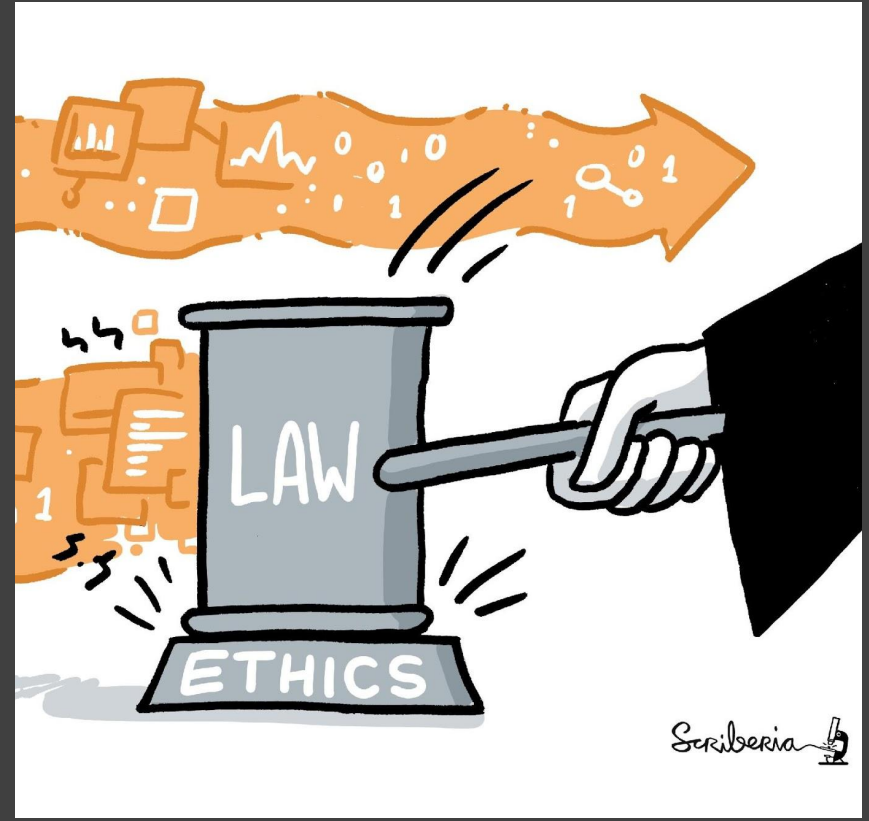
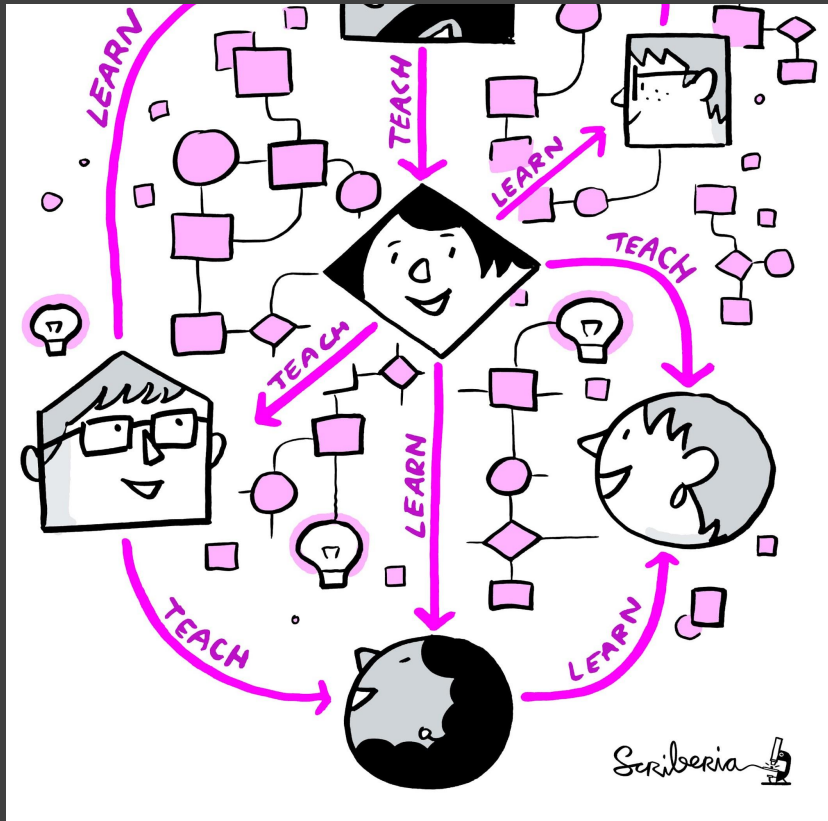
This guide covers topics related to effective and inclusive collaboration.

Data science is defined by its interdisciplinarity. Our work can only reach its greatest potential if there are diverse teams of people involved in designing and delivering the research or product.



Fig. 37 The Turing Way project illustration by Scriberia. Zenodo. <http://doi.org/10.5281/zenodo.3332807> |

Guides for Communication and Ethical Research



Project Design

Why do we need to consider best practices for project design?



What does your project design look like?

Past me:



Leave me alone with my
code & research!

What does your project design look like?

Current me:



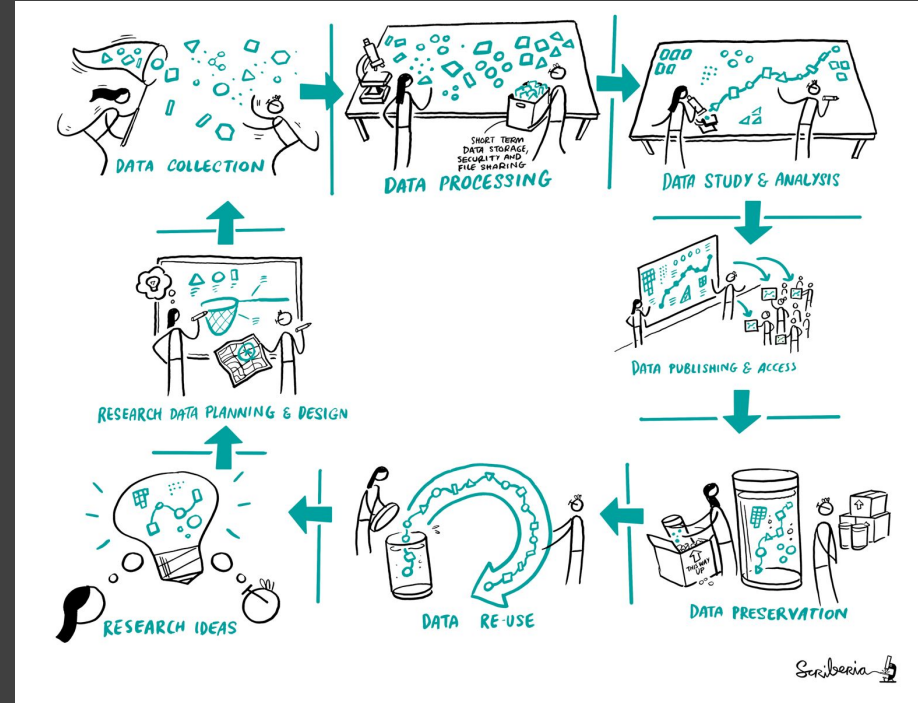
Want to make my
research reproducible,
accessible & useful for
me and others.

Reflection and note-taking

What are your project design regrets, mistakes or lessons learned?

Project Design: Tools, Practices, Processes

- Vision, goals and milestones
- Collaborators and users
- Platforms for collaboration
- Standards, convention & protocols
- Data and research objects
- Document methods & process
- Communicate workflow & results
- Share all research objects



Why document project design aspects?

- Ensure sustainability and reusability of research outcome
- Ensure inclusive culture and involve diverse stakeholders
- *What else?*

Project Design Wish List

CW21: Good Practices for Designing Software Development Projects (The Turing Way) #1837

Open

BatoolMM opened this issue 21 hours ago · 0 comments



BatoolMM commented 21 hours ago

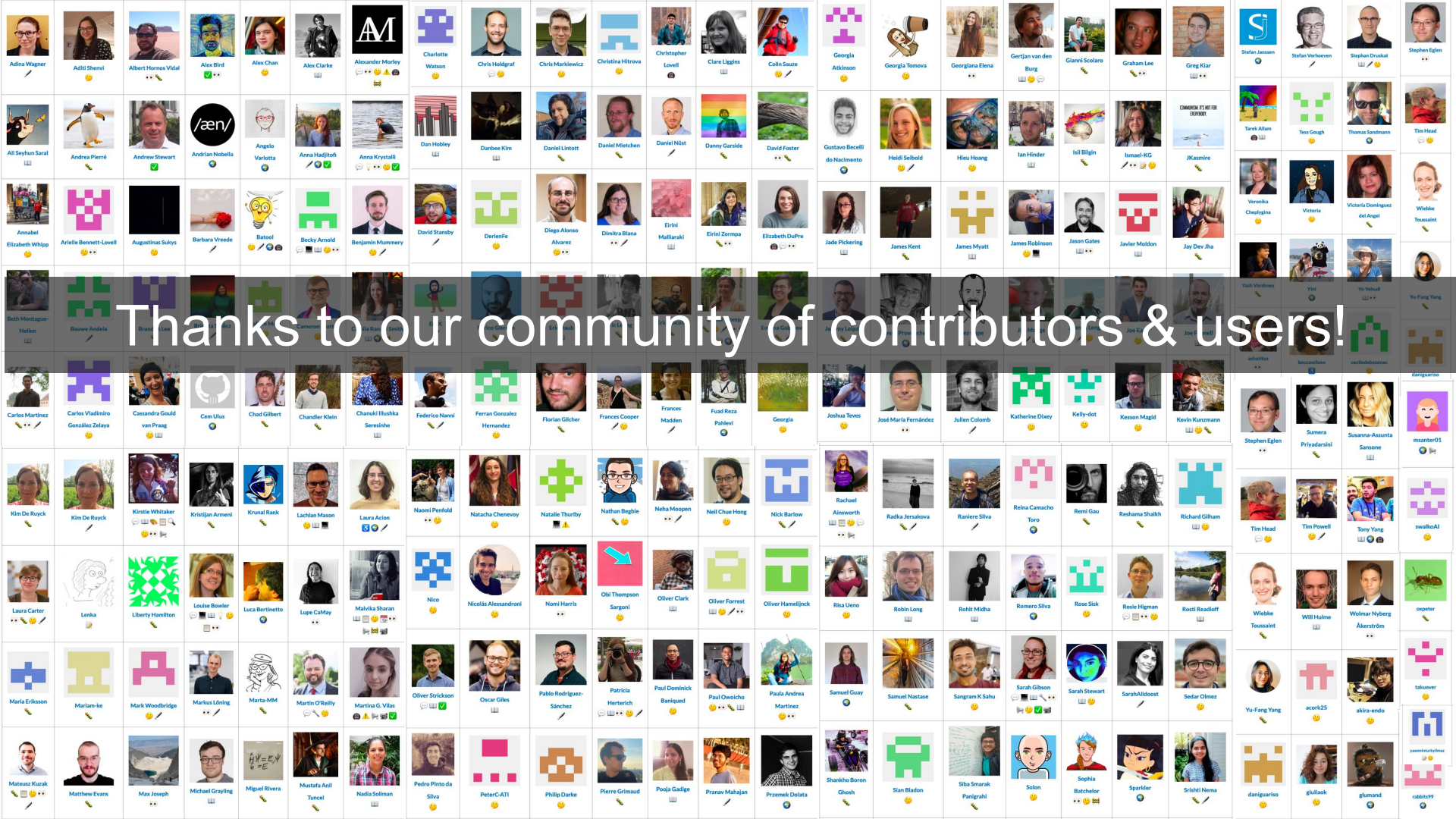
Collaborator

👋 We're excited that you're here and want to contribute. 🙌

Summary:

- At the **Software Sustainability Institute's Collaborations Workshop 2021**, *The Turing way* will present a mini-workshop under the title "Good Practices for Designing Software Development Projects" on the 30 March 2021.
- **The Turing Way** is an open-source community-driven guide to reproducible, ethical, inclusive and collaborative data science. It consists of five guides on different aspects Data Science, including the [Guide for Project Design](#).
- We invite suggestions and **contributions to the Guide for Project Design**. See the [abstract for details](#)
 - Project management and design are critical to the success and sustainability of any research project. Researchers often share horror stories from their projects due to mismanagement or poor planning. Project design should address various aspects, including the key research questions, intended users, target audience, potential outcomes, the possible challenges, diversity of stakeholders and many more.

- GitHub Issue Demo
- Shared notes
- Connect with us



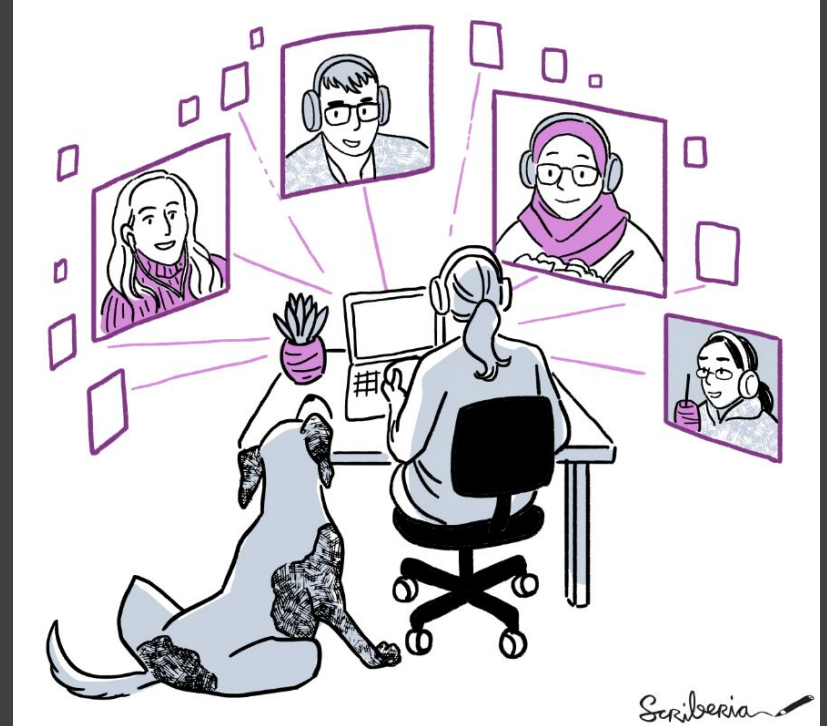
Thanks to our community of contributors & users!

Next Book Dash: 17-21 May 2021

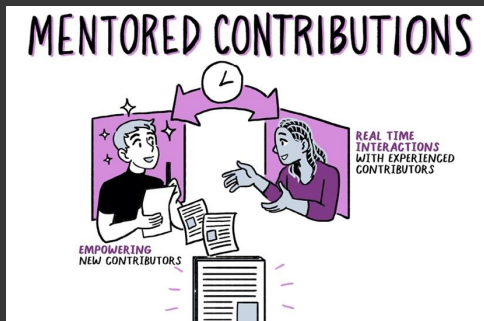
- Virtual event
- 4 days, short development sessions (1-2 each day)
- Applications by 15th April
- Collaborate, develop resource, add features

<https://tinyurl.com/tw-bookdash-template>

Email Malvika: msharan@turing.ac.uk



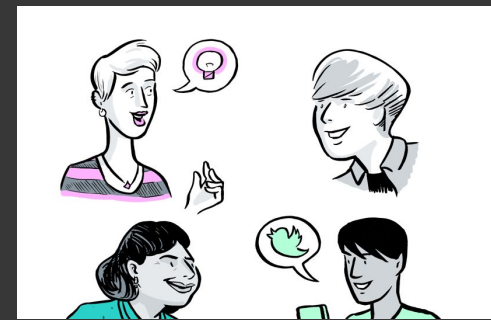
Pathways for Collaboration



Connect with us



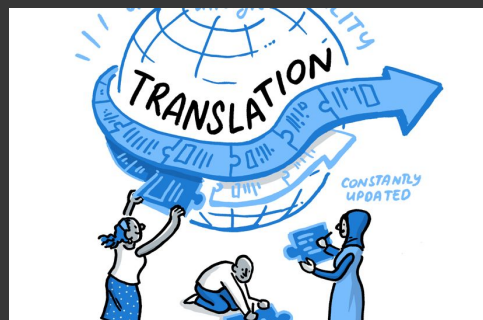
Start where you can



Discuss your ideas



Edit, review, update



Help make it global



Join the community

Connect with us:

- Batool Almarzouq (@batool664), Core Contributor
- Emma Karoune (@ekaroune), Core Contributor
- Kirstie Whitaker (@kirstie_j), Project Lead
- Malvika Sharan (@malvikasharan), Community Manager
- *The Turing Way* community, friends & collaborators

**The
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Useful links:

- Twitter: twitter.com/turingway
- Newsletter: tinyletter.com/TuringWay
- GitHub: github.com/alan-turing-institute/the-turing-way
- Slack: <https://tinyurl.com/jointuringwayslack>
- Artwork by Scriberia: <https://doi.org/10.5281/zenodo.3332808>

