

The Alan Turing Institute

Open science for enabling reproducible,
ethical and collaborative research

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Community Management

Pronouns: she/her/hers



The Turing Way

An open science project and **community-driven handbook** on data science and research practices.



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An open science project and **community-driven handbook** on data science and research practices.

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

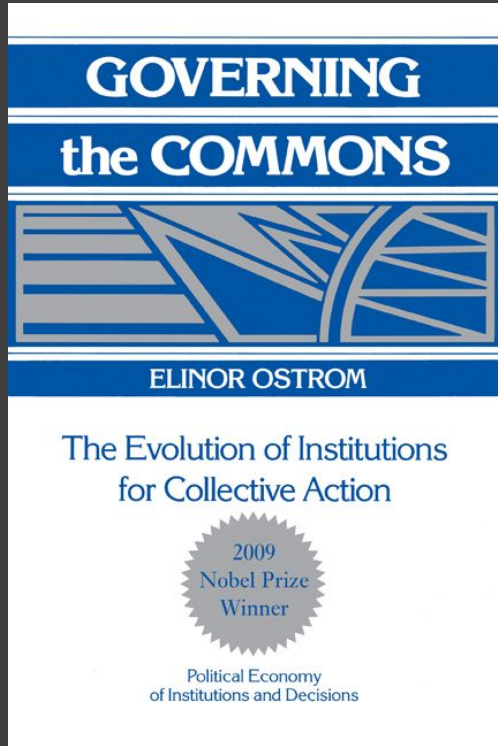


What are we trying to address as a community?

The goal of open science is **NOT** openness itself, it's about **enhancing knowledge equity** for diverse actors who can **access, produce and set the direction** of knowledge.

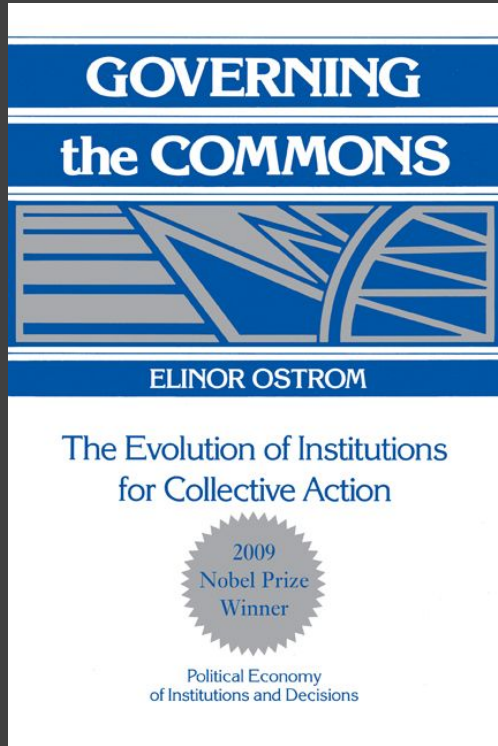


Aligned with Knowledge Commons



Knowledge commons: Information, data, and content that is collectively owned and managed by a community of users - without depleting their quantity or quality.

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Digital commons: Global digital resources produced and maintained **collectively and in a decentralized manner**.

Promotes licensing, authorship, peer production, governance and **participatory ways to fostering equitable access** to resources. (Open Science)

No Commons without Commoning!

A resource



A community

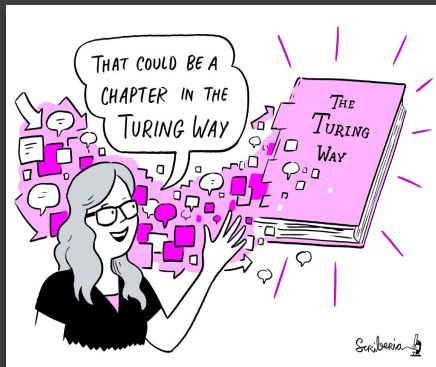
Governance: rules to care for resources & community

The Turing Way: A Global Digital Common



An open and community-driven guide on Data Science.

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



Open Access
Resource



Open Source
Community



Practices to promote
knowledge diversity



Advocacy and
Interventions

Started as a book on reproducible research

Guide for Reproducible Research

- Overview
- Open Research
- Version Control
- Licensing
- Research Data Management
- Reproducible Environments
- BinderHub
- Code quality
- Code Testing
- Code Reviewing Process
- Reusable Code
- Continuous Integration (CI)
- Reproducible Research with Make
- Research Compendia



Fig. 3 The Turing Way project illustration by Scriberia. Used under a CC-BY 4.0 licence. DOI: [10.5281/zenodo.3332807](https://doi.org/10.5281/zenodo.3332807).

The Turing Way Guides



Reproducibility



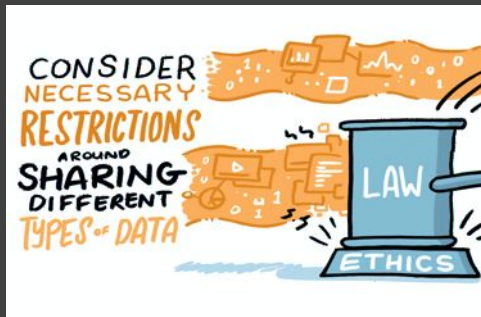
Project Design



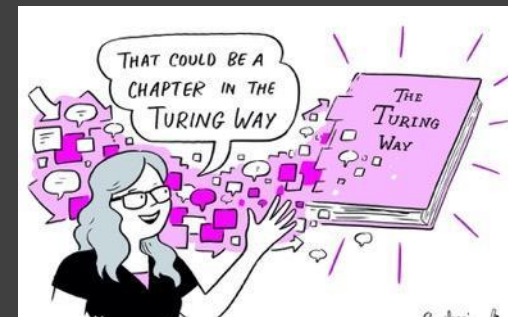
Communication



Collaboration



Ethical Research



Community Handbook

The Turing Way: Guides on Data Science



Kirstie Whitaker

Director: Tools,
Practices & Systems
Programme (TPS)



Malvika Sharan

TPS Senior
Researcher: Open
Research & Community



Anne Lee Steele

Community Manager,
The Turing Way



Alexandra
Araujo Alvarez

Project Manager

4+ years

>300 Chapters

Numerous training
and community
resources.



The Turing Way

🔍 Search this book...

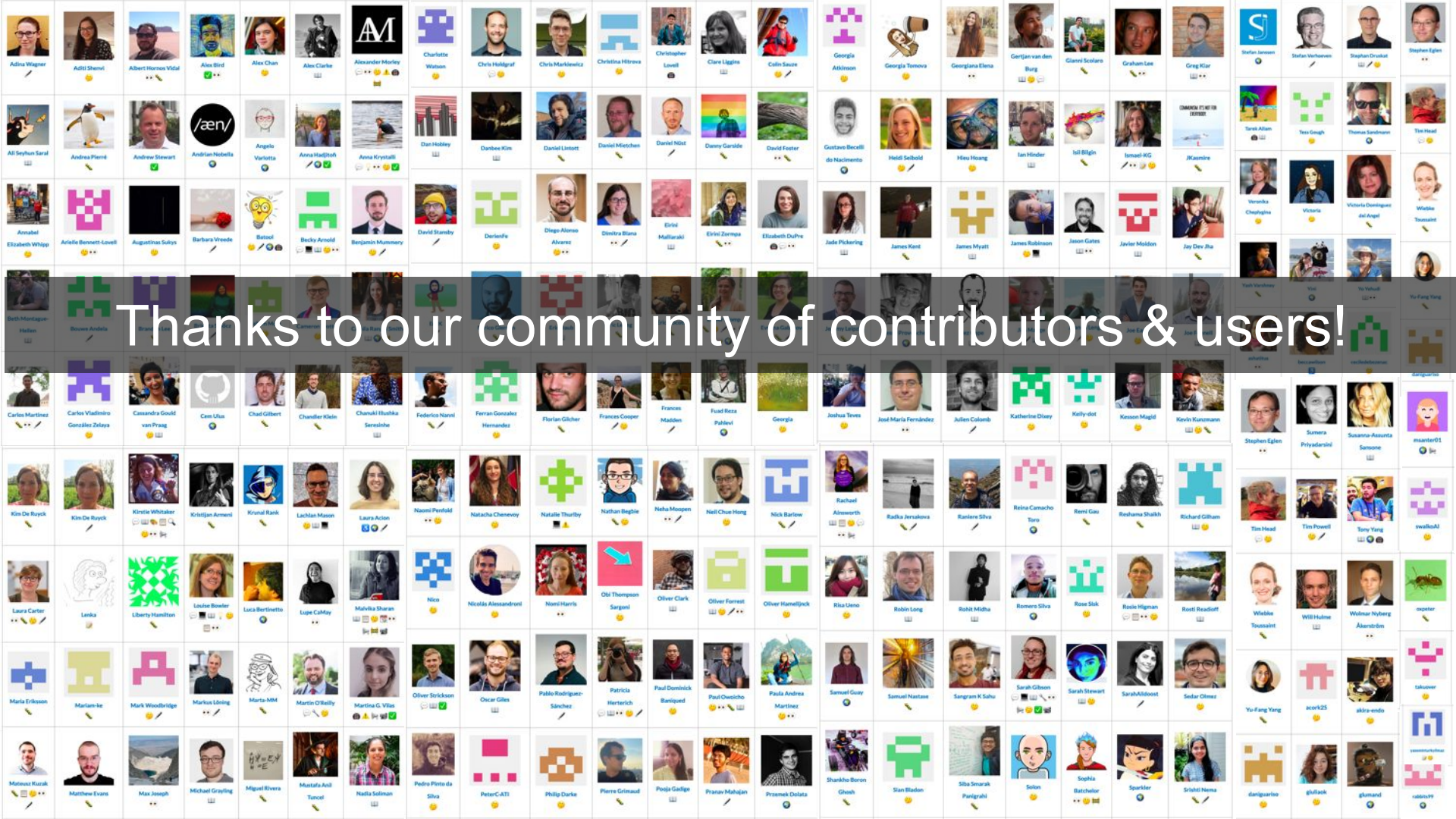
Welcome

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

The Alan Turing Institute

The national institute for
data science and artificial
intelligence

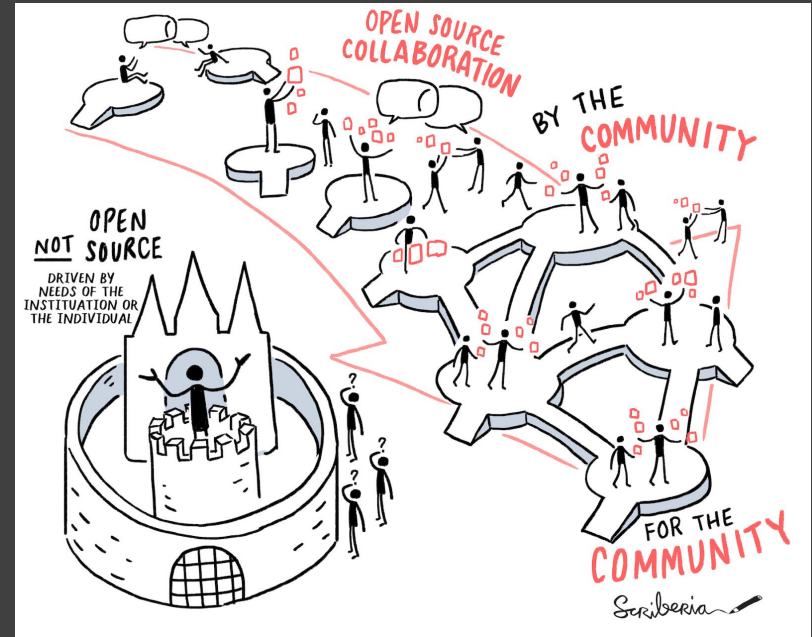




Thanks to our community of contributors & users!

Open science progresses open science

Open science enables the development, maintenance and sustainability of digital commons, while sharing benefits with all involved.



Project growth & recognitions

- 450+ contributors, 5000+ monthly users - supported by 25+ core members (governance)
- 2 awards and engagement with 45+ orgs
- References in 40+ peer reviewed articles and 100s of publications, reports, policy documents
- Replication/extension by 3 Turing & 7+ external projects

zenodo

25,793
views

22,553
downloads



hidden
REF

Open:UK Awards



Open Post Academics



📁 .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

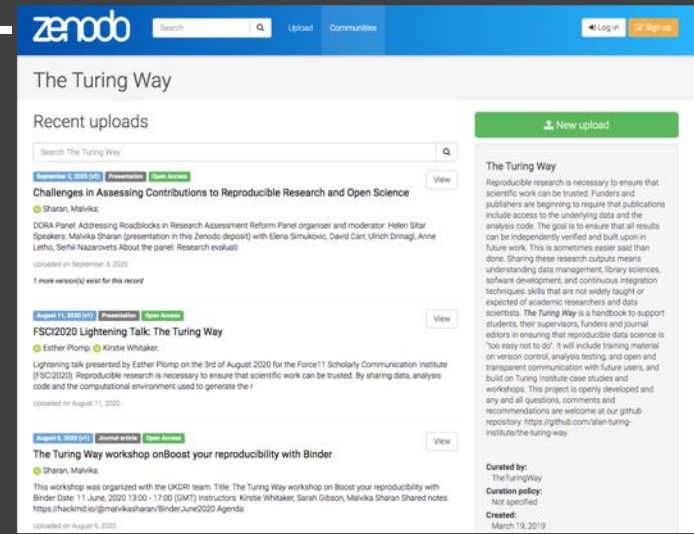


📄 .all-contributorsrc	Merge pull request #991 from alan-turing-institute/all-contributors/a...	5 days ago
📄 .gitignore	ignore pptx in workshop folder	9 months ago
📄 .travis.yml	add html-proof file again	last month
📄 <u>CODE_OF_CONDUCT.md</u>	her -> their	6 months ago
📄 <u>CONTRIBUTING.md</u>	Update CONTRIBUTING.md	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

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

An open source project

- Everyone can freely read, reuse, distribute, modify and help develop.
- The project belongs to *The Turing Way* community.
- Built on open source infrastructure:
 - Git, Jupyter Book, Binder, project bots etc.
 - Netlify: the-turing-way.[netlify](https://zenodo.org/communities/the-turing-way).app/welcome



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The Turing Way

New upload

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September 5, 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 organizer and moderator: Helen Star Spink; presenters: Malvika Sharan (presentation in this Zenodo deposit) with Elena Simukovic, David Carr, Ulrich Dirnagl, Anne Lehro, Serhi Nazarovets About the panel: Research evaluation

Uploaded on September 5, 2020

1 more version(s) exist for this record

August 11, 2020 [0] Presentation Open Access View

FSC2020 Lightning Talk: The Turing Way

Esther Pompl; @Kirstie Whitaker

Lightning talk presented by Esther Pompl 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

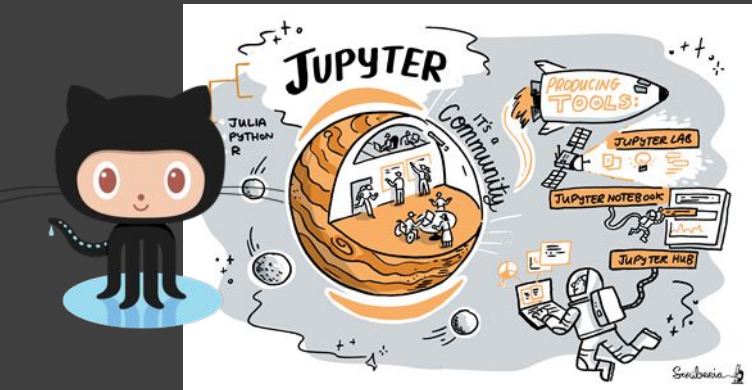
This workshop was organized with the UKDR team. Title: The Turing Way workshop on Boost your reproducibility with Binder Date: 11 June, 2020 13:00 - 17:00 (GMT) Instructors: Kirstie Whitaker, Sarah Gibson, Malvika Sharan Shared notes: <https://hackmd.io/@malvikasharan/BinderJune2020> Agenda

Uploaded on August 6, 2020

Curated by: The Turing Way

Curation policy: Not specified

Created: March 19, 2019



The Turing Way Guides



Top Tip

The Turing Way is not meant to be read from start to finish. Start with a concept, tool or method that you need now, in your current work. Browse the different guides that make up the book, or use the search box to search for whatever you would like to learn about first.



Collaboration



Ethical Research



Community Handbook

Belongs to the community

This is **not** a Turing project - although it has great support from the Institute.

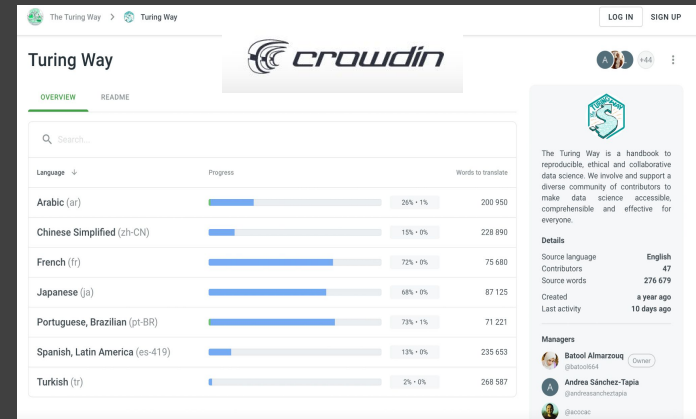
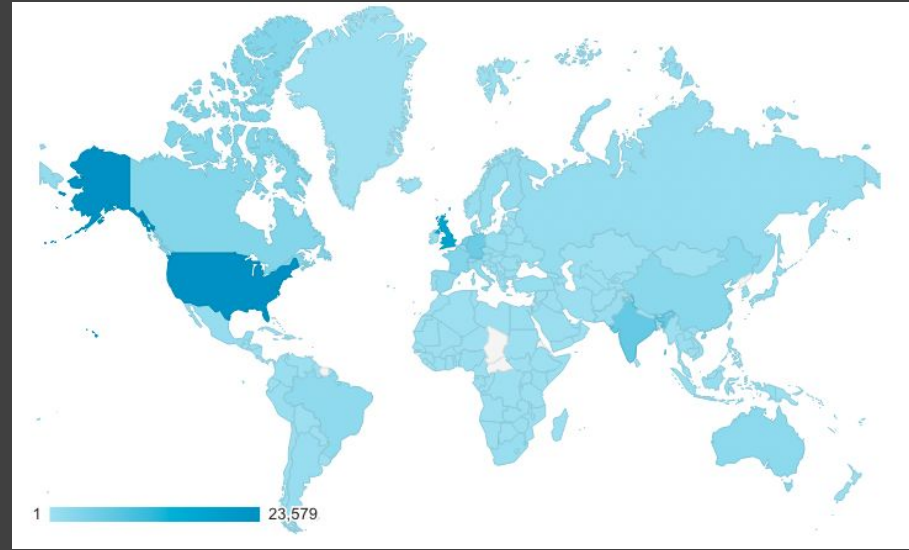
This is **always a work in progress** - evolving with the needs in the community.

We are creating community resources together -- **it's about the way, the journey, not a set of rules.**

Resources:

Image 1: The Turing Way book visitors as of Dec' 22,

Image 2: Localisation and translation of resources in multiple languages



Many pathways for contributions



Develop



Maintain & improve



Share resources



Review and update



Make it global



Share best practices

Localisation & Translation

Batool Almarzouq, Andrea
Tapia Sanchez, Melissa Black

Research Infrastructure Roles

Arielle Bennett, Esther Plomp,
Emma Karoune (Skills Policy Award)

Training and outreach

Regular volunteer and experts
from the community



Infrastructure Maintainers

Sarah Gibson, Jim Madge,
Danny Garside, Brigitta Sipőcz

Accessibility

Liz Hare, Alexandra Araujo
Alvarez, Laurel

Different PathWAYS
in *The Turing Way*

Practitioners Hub

Cross-sector engagement

Environmental Data Science

Alejandro Coca, Anne Fouilloux

Book Dash and Community Events

Team and term-based roles.



Recognition for all contributors

Afterword

Glossary

Bibliography

Contributors Record

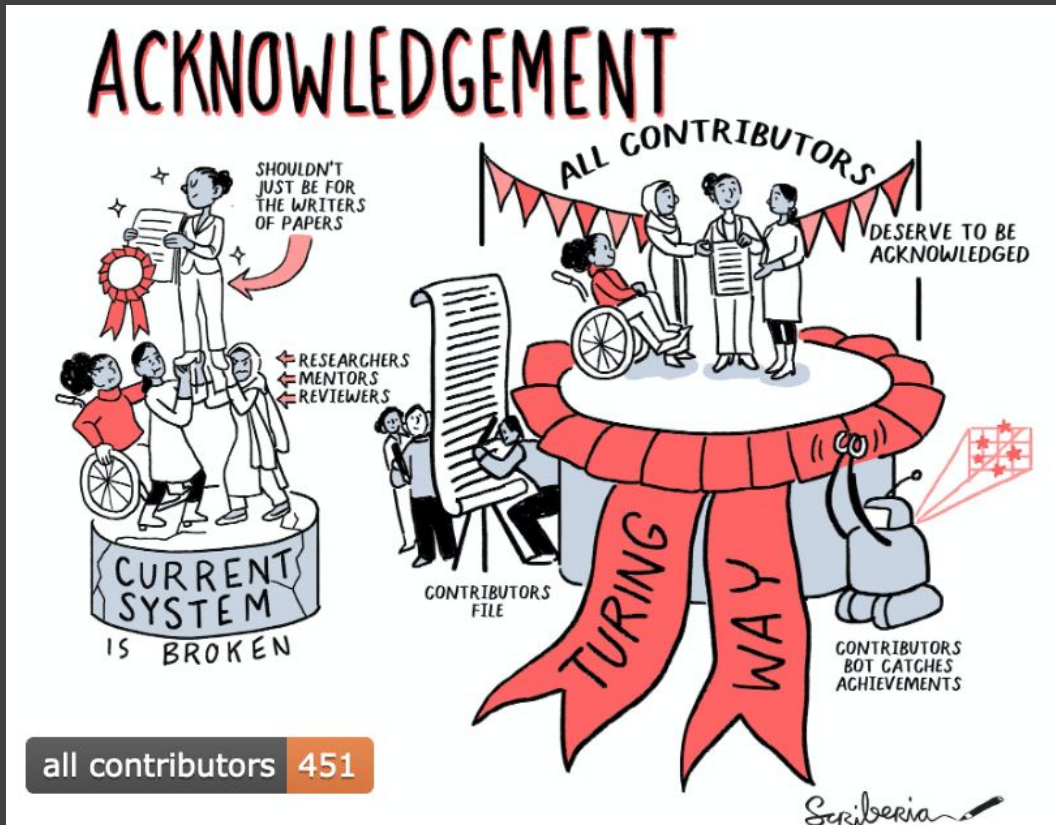


All Contributors

Recognize All Contributors

Including those that don't push code

Cite as: *The Turing Way Community. (2022). The Turing Way: A handbook for reproducible, ethical and collaborative research (1.0.2). Zenodo. <https://doi.org/10.5281/zenodo.7625728>*

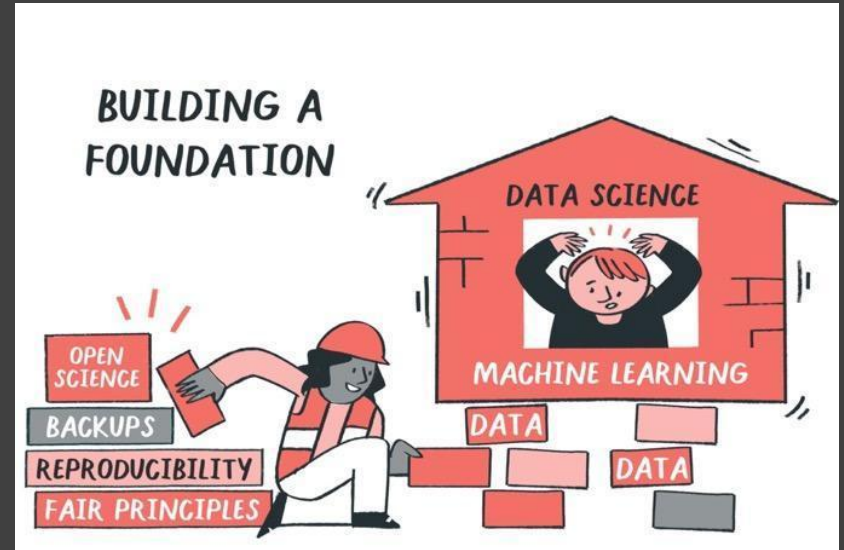


all contributors 451

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Foundational skill-set

Purpose of open science is to ensure scientific integrity and quality outcomes, achieved by applying **reproducible, ethical, collaborative and inclusive** research practices.



The **OLS** (formerly Open Life Science) is an open science training & capacity building organisation.



7 Cohorts, 237 projects.
Fellowship for leadership development.



500+ members involved in research infrastructure and communities.



openlifesci.org

As a community, we should constantly reimagine openness

Open Science is not a radical approach, but a tool to **learn, unlearn, challenge, dismantle and reimagine** infrastructure that enables **reproducible, ethical and collaborative research**.



Acknowledgements & Links

The
Alan Turing
Institute

The Turing Way Community

- Jupyter Book Team, Infrastructure Maintenance Working Group
- Arya A. Johanna Bayer, Ian Stenson, Lydia France, May Yong
- Kirstie Whitaker, Anne Lee Steele, Alexandra Araujo Alvarez + many Turing Way Core Team and Turing's TPS team members

Links and resources

- **Book:** the-turing-way.netlify.com, **Start Page:** the-turing-way.start.page
- **GitHub:** github.com/alan-turing-institute/the-turing-way
- **Useful links & opportunities are listed here:** <https://bit.ly/turingway>

Images used in this talk have been co-developed by Scriberia and The Turing Way community, shared under CC-BY 4.0. <https://zenodo.org/record/7587336>

