The Alan Turing Institute

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

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Pronouns: she/her

@turingway, @ekaroune, @batool664, @malvikasharan, CC-BY 4.0, https://zenodo.org/record/4650221



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.

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

@turingway, CC-BY 4.0, The Turing Way, DOI: 10.5281/zenodo.4650221



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

GitHub:

github.com/alan-turinginstitute/the-turing-way

Twitter: twitter.com/turingway

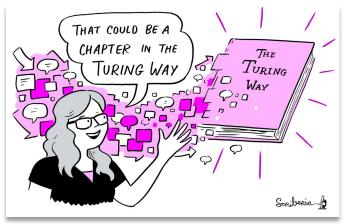
Email: theturingway@gmail.com

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An Open Source Project



A Book



A Community



A Culture of Collaboration



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templates	Updating Github templates								
tests	Add "et cetera" as a deprecated Latinism	Y Y							
workshops	Remove mis-pasted text								
.all-contributorsrc	Merge pull request #991 from alan-turing-institute/all-contribute	itors/a 5 days ago							
.gitignore	ignore pptx in workshop folder	9 months ago							
.travis.yml	add html-proof file again	last month							
CODE_OF_CONDUCT.md	her -> their	6 months ago	Oper						
	Update CONTRIBUTING.md	2 months ago							
GOVERNANCE.md	Read through months later	5 months ago	CC-F						
LICENSE.md	Fix typo in licence	2 months ago							
README.md	Merge pull request #991 from alan-turing-institute/all-contribute	utors/a 5 days ago							
book_skeleton.md	Update book_skeleton.md	13 months ago	Hoste						
Contributors.md	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

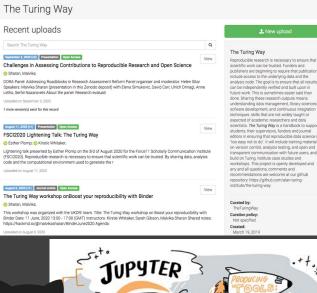
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• Hosted on GitHub

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An open source project

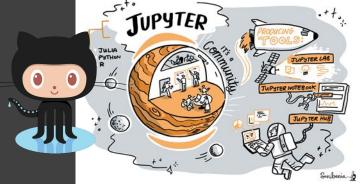
- Everyone can freely read, reuse, distribute, modify and co-develop.
- The project belongs to *The Turing Way* community.
- Built on Open Source projects:
 - git, Jupyter Book, Netlify, Binder, bots etc.



Upload Communities

•D Log in

a



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zenodo

Moonshot Goal: Reproducibility "too easy not to do"

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The Turing Way

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Welcome

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

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.



The Turing Way book with five guides: https://the-turing-way.netlify.app/welcome, @turingway, DOI: 10.5281/zenodo.4650221

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.



https://the-turing-way.netlify.app/reproducible-research, @turingway, DOI: 10.5281/zenodo.4650221

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

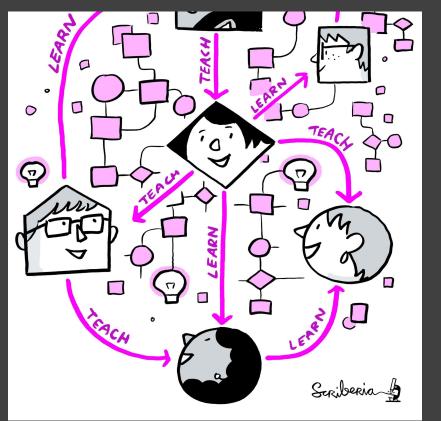
This guide covers topics related to effective and inclusive collaboration.

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.



Guide for Collaboration: https://the-turing-way.netlify.app/collaboration, @turingway, DOI: 10.5281/zenodo.4650221

Guides for Communication and Ethical Research





https://the-turing-way.netlify.app/communication, https://the-turing-way.netlify.app/ethical-research, DOI: 10.5281/zenodo.4650221

Project Design

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

IDENTIFY WHERE ASK RELEVANT THE DATA IS REJEARCH QUESTIONS PLANNINGT: TEAN MEASURES OF STYLES OF WORKING SACCESS PROJECT MGMT DESIGN Scriberia

What does your project design look like?

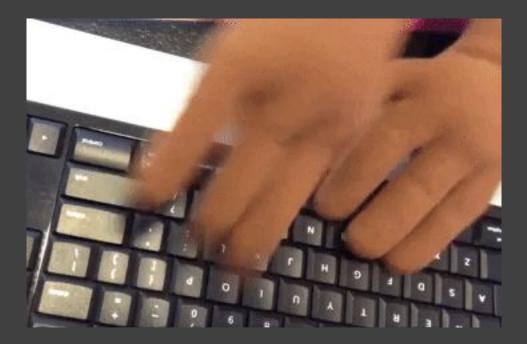
Past me:



Leave me alone with my code & research!

What does your project design look like?

Current me:



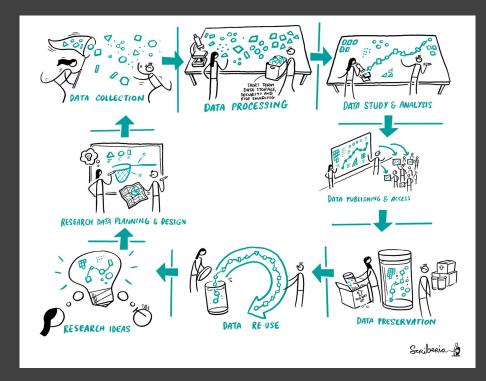
Want to make my research reproducible, accessible & useful for me and others.

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

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BatooIMM opened this issue 21 hours ago · 0 comments



BatooIMM commented 21 hours ago

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Collaborator

 \gtrsim We're excited that you're here and want to contribute. \gtrsim

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

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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

Useful links:

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





