

Developing a Workflow to Maximize Reproducibility and Research Impact: Managing Data, Computer Code, and Projects for Success

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Why worry about reproducibility?

**Working towards future
reproducibility makes my
code easier**

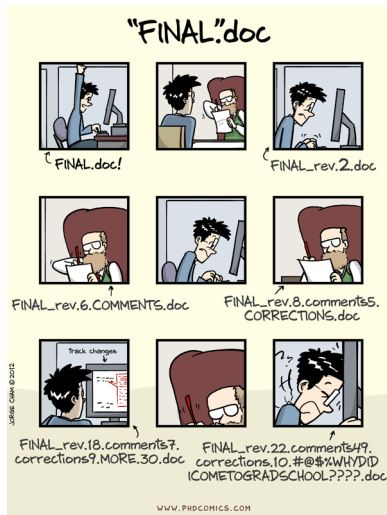
for my collaborators (and me) to
read, run, and debug

today,

and that's why I think
reproducibility is a

win-win for all researchers."

-Althea



Why worry about reproducibility?

“[Reproducibility] provides security, saves time, and forces me to be more thoughtful about my workflow.” - Ethan Young

- ▶ make your life easier!
- ▶ collaborations
- ▶ broader research impact
- ▶ increased citations
- ▶ transparency
- ▶ grant and journal requirements

Is my research reproducible?

- ▶ Are your research documents stored in these formats?

- ▶ .csv

- ▶ .txt

- ▶ .pdf

- ▶ .html

- ▶ .R

- ▶ YES!

- ▶ .doc/.docx

- ▶ .sas

- ▶ .xls/.xlsx

- ▶ any other proprietary file format

- ▶ NO!

Is my research reproducible?

- ▶ Are your files easily shared with others?
 - ▶ Solution 1: GitHub
 - ▶ Solution 2: Organized directory structure
- ▶ Are your files relatively linked?
 - ▶ Solution: RStudio projects
- ▶ Is your code well-documented/commented?
 - ▶ Solution: R-Markdown or R-Oxygen