

Project Management and Documentation

Objective

Learners will learn about and practice managing their projects using file structure and RStudio projects, and about current best practices and style guides for R coding.

Lesson Outline

- Introductions
- Discuss reproducibility
- Give tour of course website & syllabus
 - Point out code of conduct
- Briefly demo Slack
- Screen setup
- Don't save or load .RData!
- Discuss general best practices for research compendia (use Carpentry lesson??)
 - All files needed for a project in the same folder (ideally)
 - Organize data, code, and outputs into different folders at a minimum
 - Never edit raw data
 - Include documentation on what each file is/does in a README
 - Project summary
 - Project status (in progress, archived, just an idea?)
 - How to give credit
 - Structure of repo (what files do what?)
 - How to reproduce results
 - Example READMEs:
 - <https://github.com/Aariq/BACE-legacy-effects>
 - <https://github.com/ecohealthalliance/amr-analysis>
 - <https://github.com/atredennick/size-environment>
- Live Coding: create an R project and add gapminder data to it
 - Show file pane & connect to Windows Explorer / Finder
 - Show how to make a file read-only
 - Demo closing, opening, and switching projects
- Homework:
 - Apply one or more of the organizing principles of a research compendium to an existing re-search project.

Installation & materials

1. Slides
2. Software Carpentry Introduction to R and RStudio episode

3. Software Carpentry Project Management with RStudio episode