Module 3: R

Submodule 11: Professional Skills

Expected length: 0.25 day

Guiding question: How can data science work be presented and managed?

Concepts: believability, trust, knitting reports, project objectives, project skills, project data

Description: This lesson introduces students to the challenges associated with presenting data science and running data science projects, and gives them the practical ability to make a professional report of their R work.

Instructor Preparation: Run all code to ensure it generates the same output as described in the lesson.

| Materials and resources | Learning objectives |
| --- | --- |
| 11-professional-skills\_deck.html  de Graaf, 2019 | 1. Awareness of the challenges of presenting data science work  2. Ability to present R work in a professional report  3. Knowledge of project management considerations for data science projects |

| Length | Lesson content | Guidelines, tips, and tricks |
| --- | --- | --- |
| 30min | Presenting data science  (de Graaf, 2019 Chapter 3) | Students ideally will read the chapter before the lesson. |
| 30min | Presenting your work in R | This is the last component that students will need to format their summative assessment project. |
| 30min | Managing data science projects  (de Graaf, 2019 Chapter 2) | Students ideally will read the chapter before the lesson. |
| 30min | Formative exercise  Discussion questions:  1. What do you think is the biggest challenge in communicating data science to non-data scientists?  2. What do you think is the biggest challenge in communicating data science to non-data scientists?  3. What questions would you add to the data science project checklist? | Allow 10 minutes for students to collect their thoughts independently. Following this, divide into groups of four students. Allow 10 minutes for groups to collect their thoughts into group documents.  Return from small groups and facilitate discussion for 10 minutes. |
| 30min | Summative assessment: Discuss knitting a professional report | At this point, students have the skills required to complete their project report. Give them the opportunity to ask questions and apply what they learned about kable and bookdown to their own reports, which should already be drafted. Knitting is error-prone, so a bit of extra time has to be allowed for debugging. |