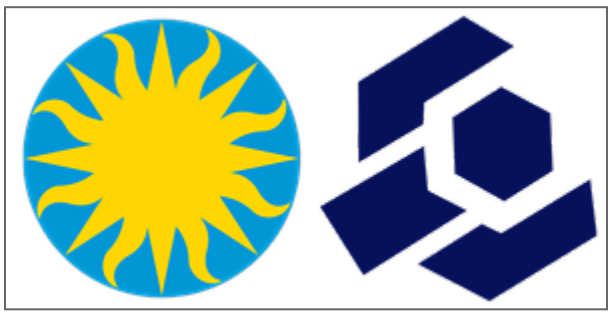
AUTUMN 2021

QUARTERLY DATA CARPENTRY WORKSHOP



Before we start...

CODE OF CONDUCT

- We are dedicated to providing a welcoming and supportive environment for all people, regardless of background or identity.

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- Go to Instructors or Helpers if you feel the Code of Conduct is being violated.
- There is also a big blue "Report a Code of Conduct Incident" on the course website if you feel the Instructors are not handling appropriately.

INTRODUCTIONS

INSTRUCTORS AND HELPERS

WHAT IS THE CARPENTRIES?

The Carpentries is a global volunteer-driven organization dedicated to teaching computational skills to researchers and anyone who works with data.

CARPENTRIES AT THE SMITHSONIAN

The Smithsonian Carpentries Team is made up of Smithsonian staff and fellows from around the institution.

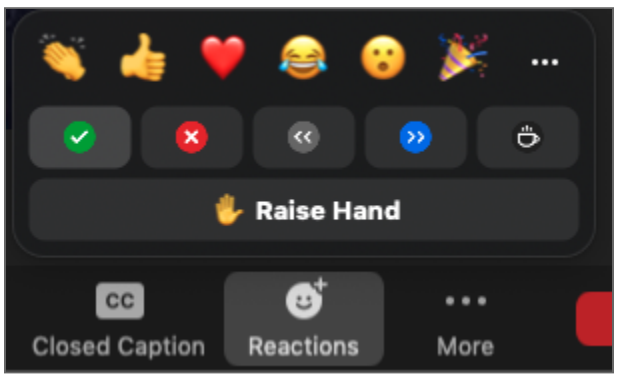
CARPENTRIES WAY OF TEACHING

Code along, rather than lecturing from PowerPoint, or just demonstrating
Odds of running into an error are high, but don’t panic – this is a great opportunity to learn

WE WON'T LEAVE YOU BEHIND

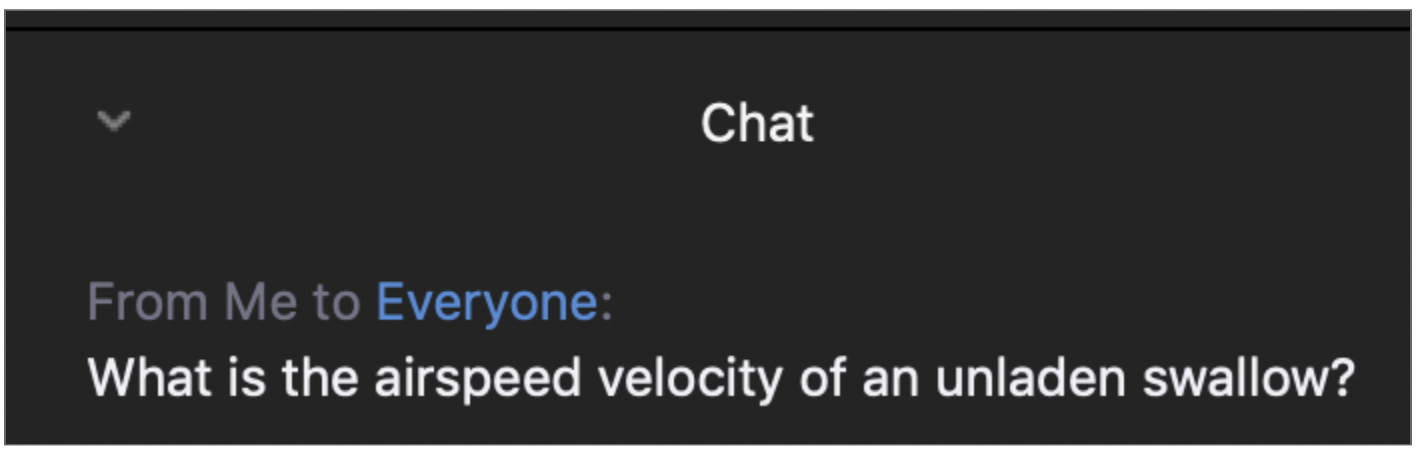
HOW TO MAKE SURE WE DON'T LEAVE YOU BEHIND

In the real world, we used to use Post-It notes to indicate progress, but for this workshop we'll use the "yes" / "no" buttons in the Zoom Reactions panel.



HOW TO ASK QUESTIONS

The Instructors will try to build in time between lessons to ask questions, but use the Zoom chat for questions that come up during a lesson.



COURSE GITHUB REPOSITORY

COURSE ETHERPAD

A collaborative document – think of it as a stripped-down version of Google Docs

YOUR FIRST CHALLENGE

- Go to the EtherPad
- Add your name, unit, and your favorite type of cookie (or other sweet treat) under Attendance Day 1

WHAT WE WILL BE TEACHING IN THIS WORKSHOP

We will be teaching you data organization, cleaning, and visualization skills, so that your analyses can be easily understoood and reproduced by your colleagues ... and your future self.

DAY ONE (TODAY)

TIDY DATA PRINCIPLES IN SPREADSHEETS

OPENREFINE

DAY TWO (TOMORROW)

SQL

DAY THREE (NEXT TUES)

INTRO TO PYTHON AND JUPYTER

WORKING WITH DATA WITH PANDAS

DAY FOUR (NEXT WED)

COMBINING DATAFRAMES WITH PANDAS

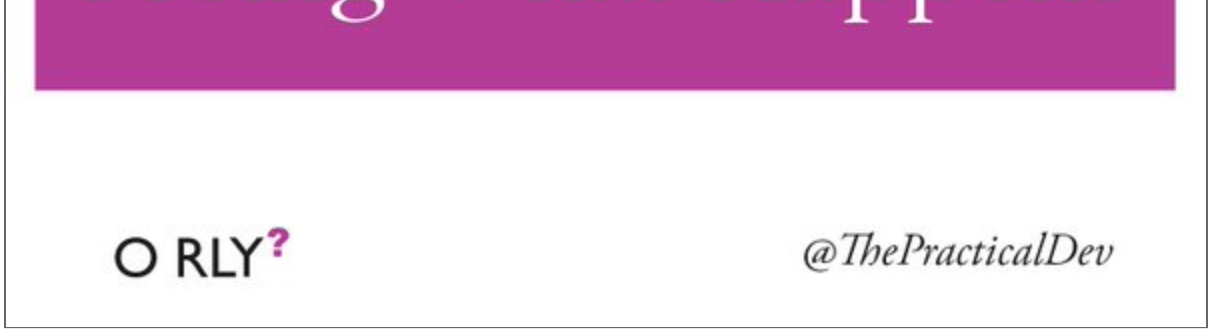
MAKING PLOTS WITH PLOTNINE

We will be teaching you a lot of valuable skills on a demo dataset, but you won't be able to add these tools to your toolbag until you work through how to apply them to your own data.

How to actually learn any new programming concept

Essential

Changing Stuff and Seeing What Happens



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@ThePracticalDev