Software Carpentry

16th - 17th December 2019
Sam Mangham, Steve Crouch, James Graham,
John Robinson, Pip Grylls, Ania Brown

@RSGSoton @swcarpentry

Software Carpentry

Before we start:

- Ensure you've installed the prerequisites
  - https://tinyurl.com/swc-dec-prereq

- Download the code repository
  - `git clone https://github.com/Southampton-RSG/2019-12-16-southampton-swc.git`
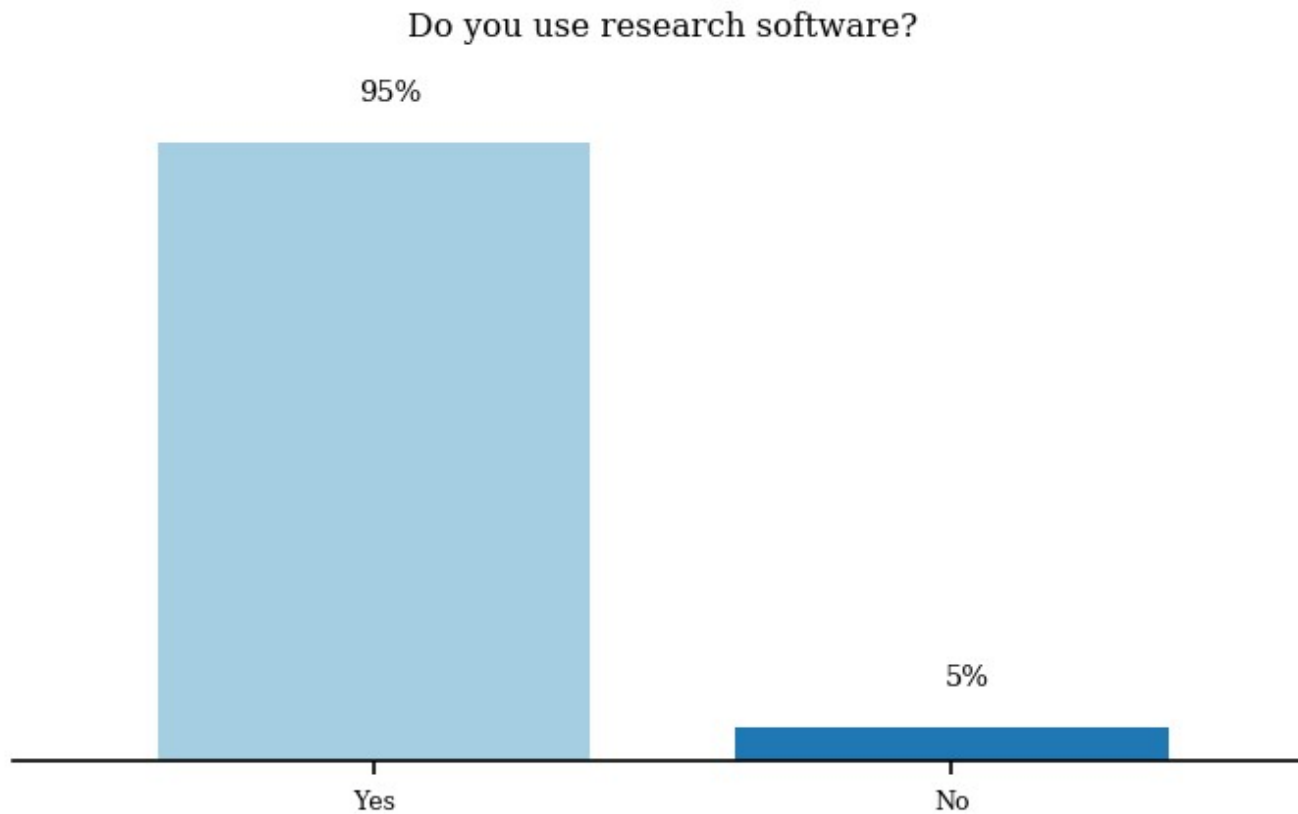
- Complete the pre-workshop survey:
  - https://tinyurl.com/swc-dec-presurvey

Housekeeping

- No fire alarm tests planned

- Toilets

Why are we here?

- We're scientists or engineers
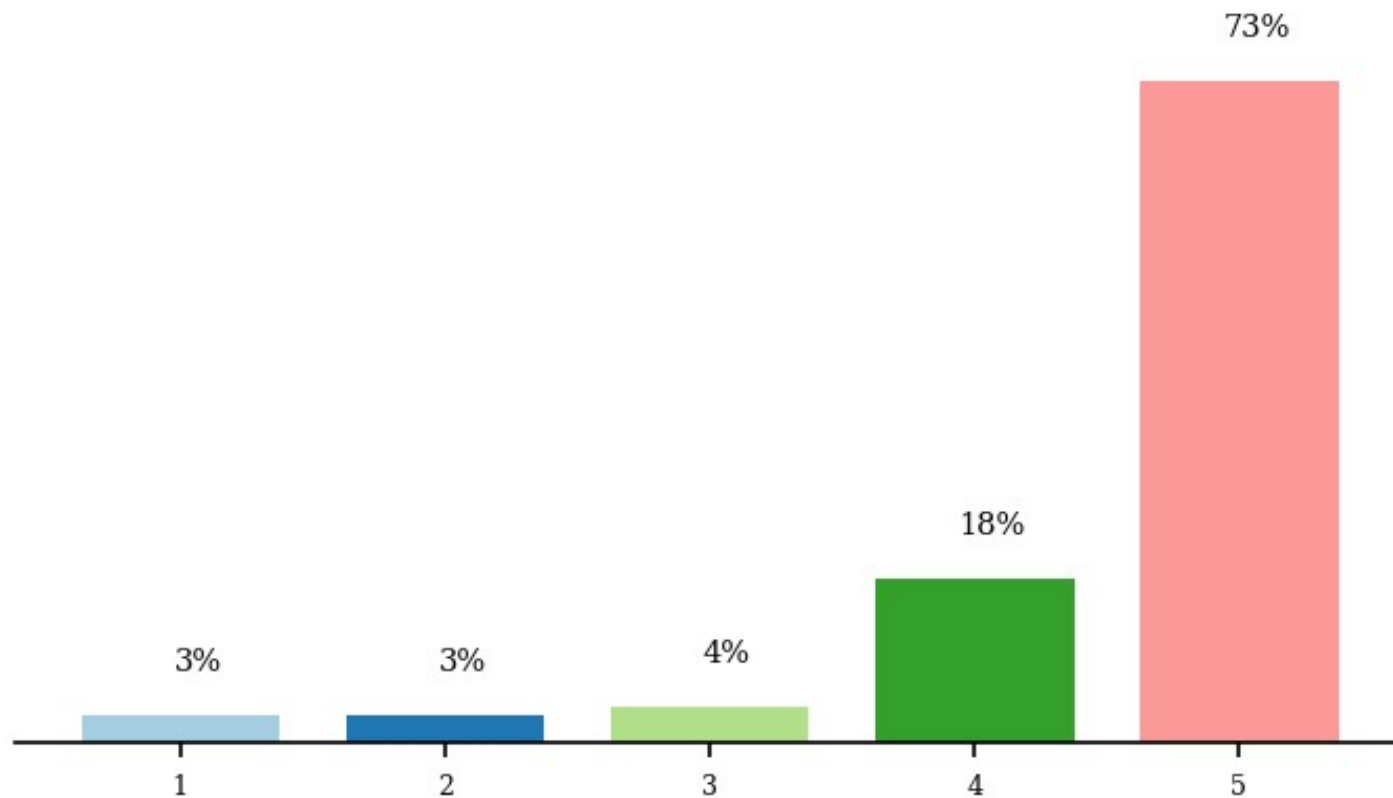
- Our research involves writing code

We should care about software

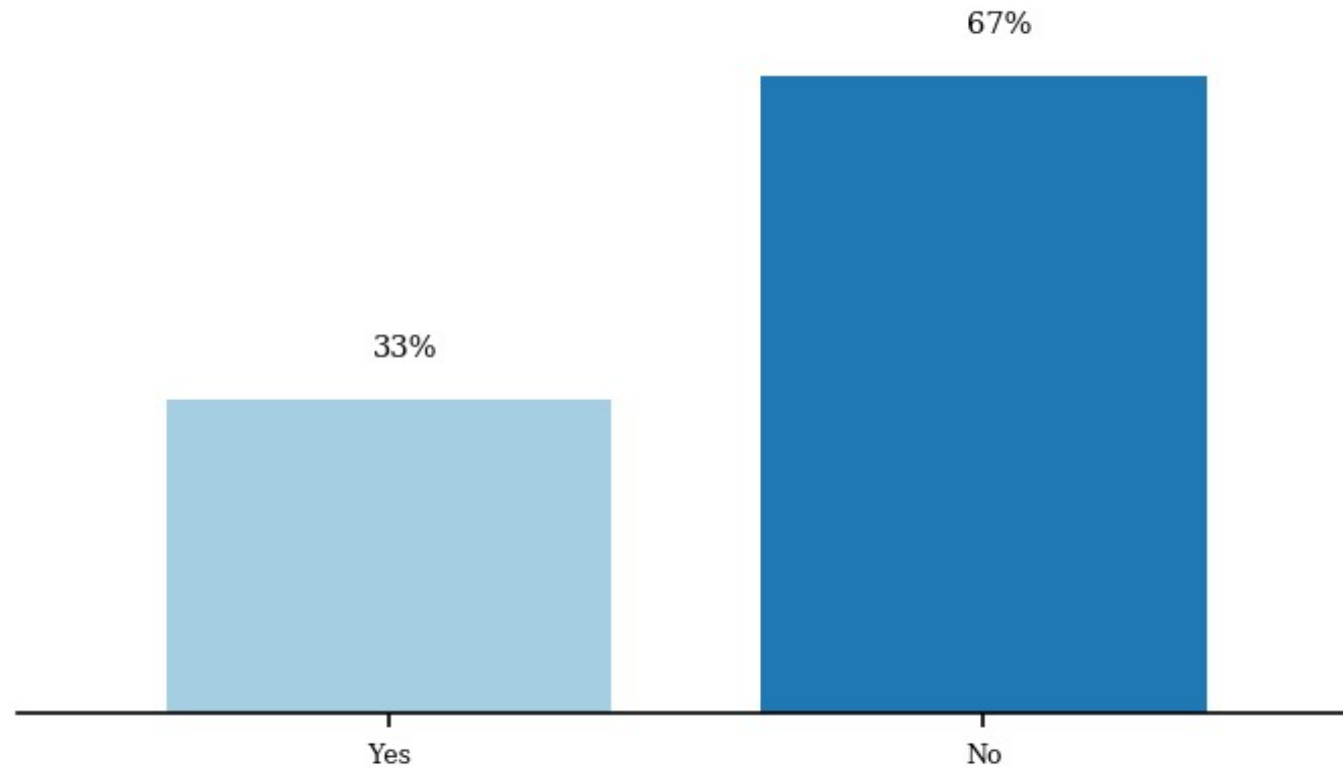University of Southampton Software Survey 2019

We should care about software

How important is research software to your work?

University of Southampton Software Survey 2019

We should care about software
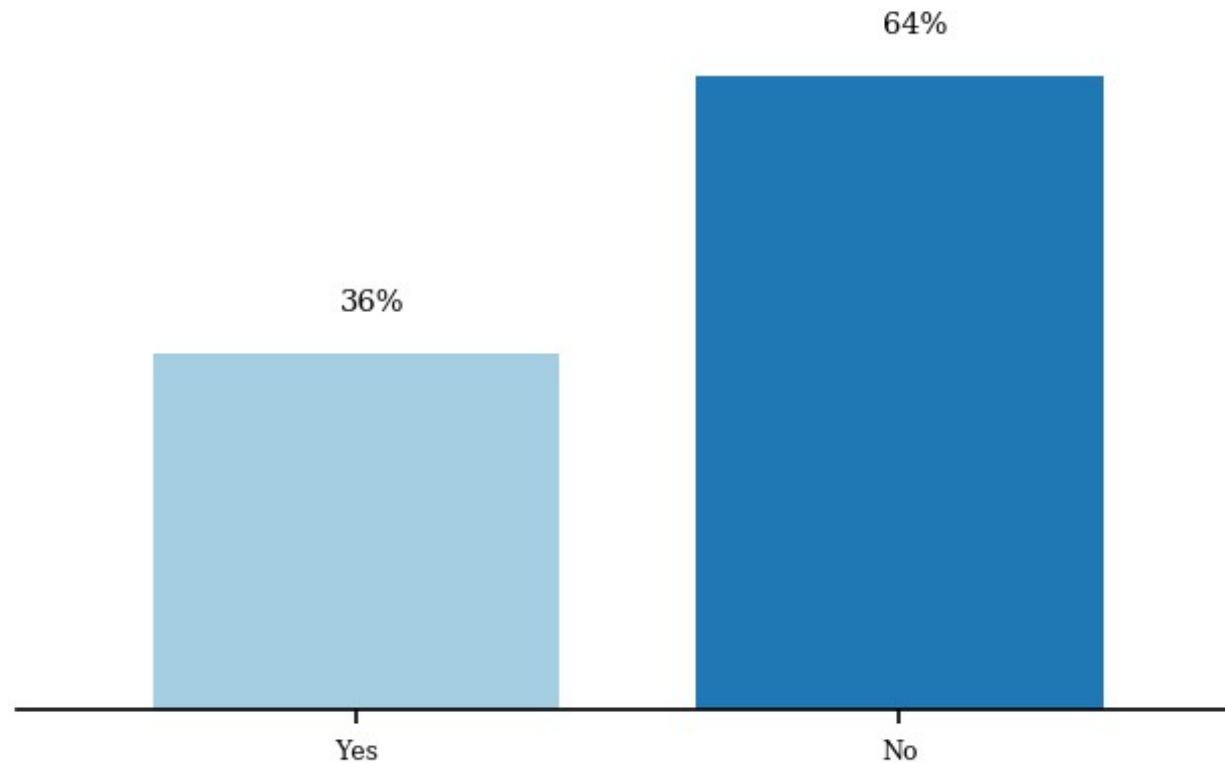

University of Southampton Software Survey 2019

We should care about software

University of Southampton Software Survey 2019

We should care about software

We want to set you on the road to writing **Sustainable Software**

Software Carpentry

- The take-home message is:

- This is the Software Sustainability Institute motto www.software.ac.uk

Software Carpentry

- "Teaching researchers the computing skills they need to get more done in less time and with less pain"

- 27,000 + Researchers taught since 1998 in 35 Countries

- Materials are freely reusable (CCA license)

Who are we?

Research Software Group – rsg.southampton.ac.uk @RSGSoton

- Sam Mangham, Steve Crouch, James Graham, John Robinson, Ania Brown, Pip Grylls

Bash Shell

- Day 1 - AM

- James Graham

- Automation

- Not just about learning commands

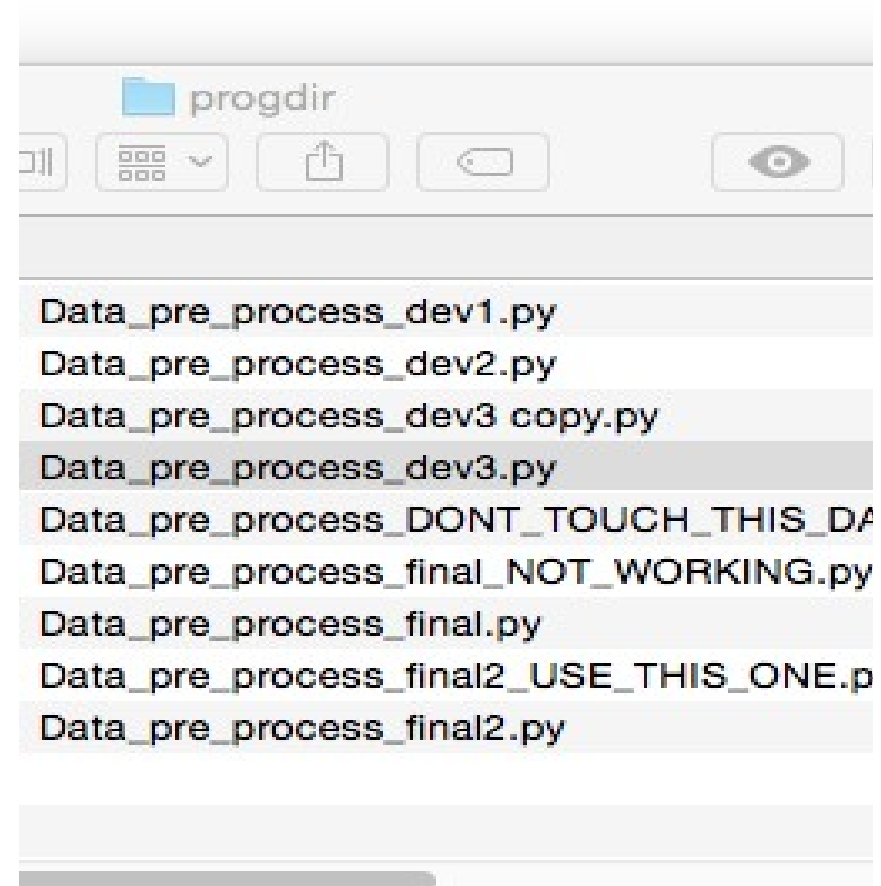- Learning just a few things can make a huge difference to productivity

Python

- Day 1 - PM
  - Sam Mangham
- Day 2 - AM
  - Steve Crouch
- Beyond syntax...
- How to build programs step-by-step
- Comprehensive, reusable, testable

Version Control (Git)

- Day 2 - PM

- John Robinson

- How has this code changed?

- Who made this change?

- Which version of this code was used to generate this result?

- Reproducibility

- Some final words

Code of Conduct

- http://software-carpentry.org/conduct/

Software Carpentry workshops are community events intended for networking and collaboration as well as learning. We value the participation of every member of the scientific community and want all attendees to have an enjoyable and fulfilling experience. Accordingly, all attendees are expected to show respect and courtesy to other attendees throughout the workshop. The same standards of behaviour are expected in Software Carpentry spaces online.

To make clear what is expected, everyone taking part in Software Carpentry events and discussions—instructors, helpers, organizers, and learners—is required to conform to the following Code of Conduct. Organizers will enforce this code throughout events, but you may also contact us directly by email at admin@software-carpentry.org. All communication will be treated as confidential.

Code of Conduct

Software Carpentry is dedicated to providing a harassment-free experience for everyone, regardless of gender, sexual orientation, disability, physical appearance, body size, race, nationality, religion, or choice of text editor. We do not tolerate harassment of participants in any form.

1. Harassment includes offensive verbal or written comments related to gender, sexual orientation, disability, physical appearance, body size, race, or religion, sexual images in public spaces, deliberate intimidation, stalking, following, harassing photography or recording, sustained disruption of talks or other events, inappropriate physical contact, and unwelcome sexual attention.

2. All communication should be appropriate for a professional audience including people of many different backgrounds. Sexual language and imagery is not appropriate for any event.

3. Be kind to others. Do not insult or put down other participants.

4. Behave professionally. Remember that harassment and sexist, racist, or exclusionary jokes are not appropriate.

Participants asked to stop any harassing behavior are expected to comply immediately. People violating these rules may be asked to leave the event or be excluded from the online venue at the sole discretion of the organizers, without a refund of any charge that may have been levied.

Thank you for helping make this a welcoming, friendly event for all.

This code of conduct is a modified version of that used by PyCon, which in turn is forked from a template written by the Ada Initiative and hosted on

Need help?

Say hi to your neighbours!

Sticky notes

Pre-workshop Survey

- Help us to help you, by telling us what you know

- 5 Questions / 1 min

  https://tinyurl.com/swc-dec-presurvey