



# Software Carpentry

National Oceanography Centre

18<sup>th</sup> - 19<sup>th</sup> September 2018

Chris Cave-Ayland, Steve Crouch, James Graham,  
John Robinson

@RSGSoton @SWC

## Before we start:

- Please ensure you've installed the prerequisites
  - <https://tinyurl.com/swc-nexuss-prereq>
- Follow the instructions on the Etherpad to download the code repository
  - <https://tinyurl.com/swc-nexuss-etherpad>

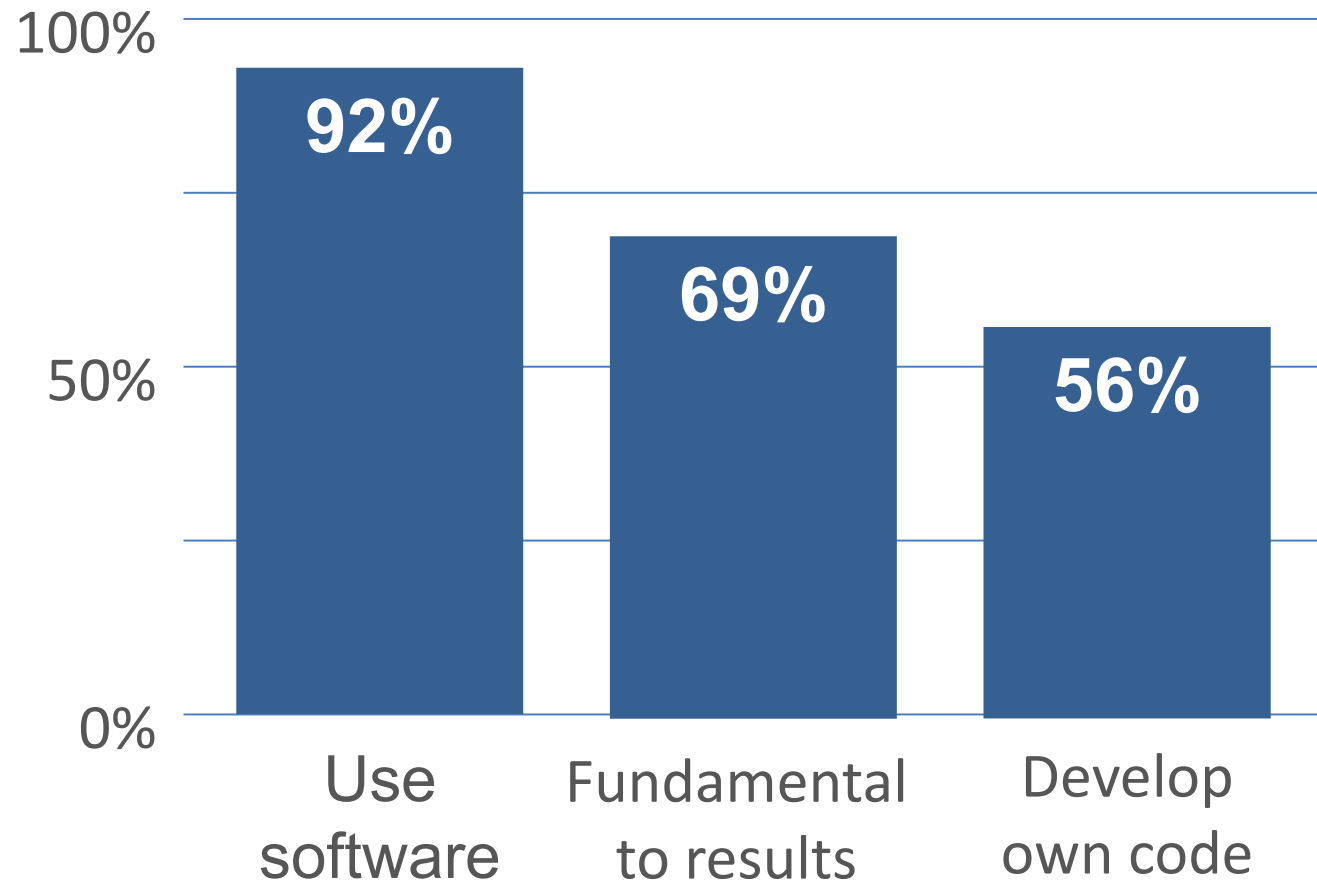
## Housekeeping

- No fire alarm tests planned
- Toilets

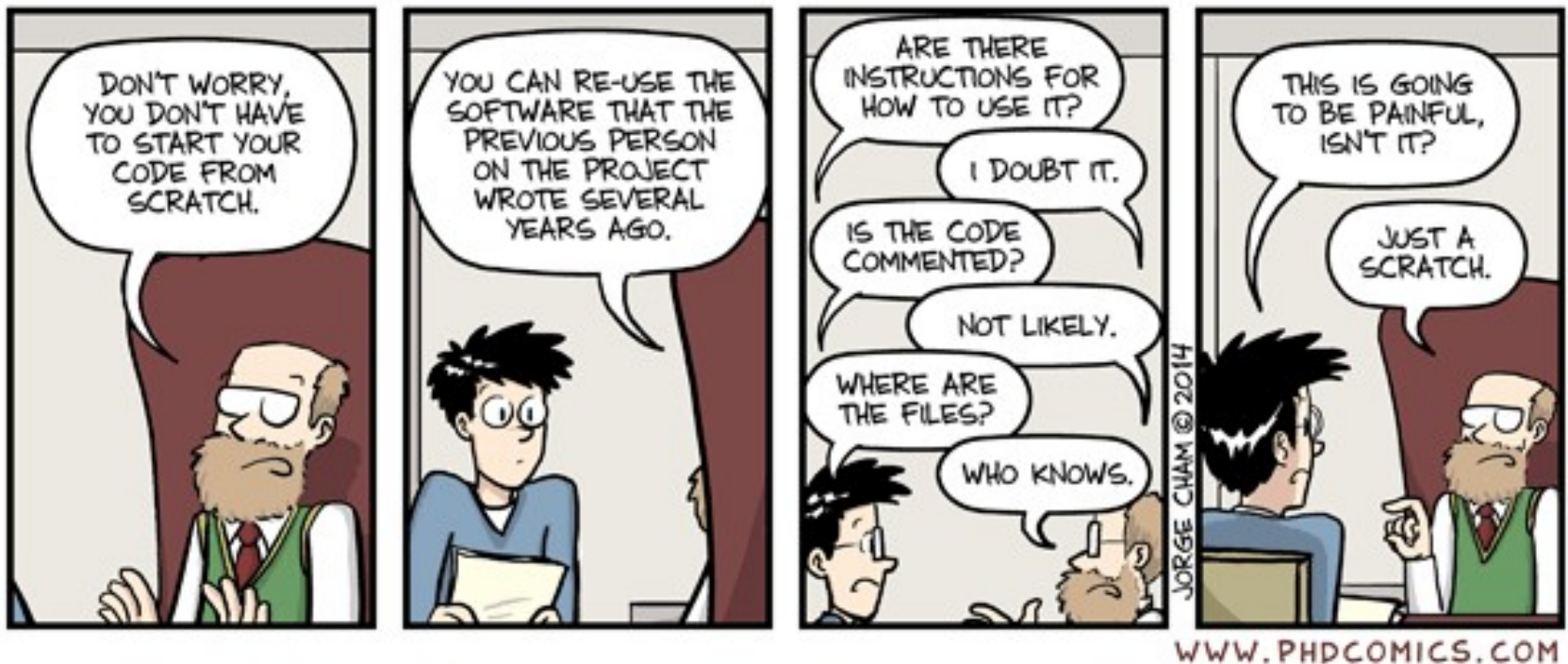
## Why are we here?

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

# We should care about software



# We should care about software



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

- The take-home message is:



- This is the Software Sustainability Institute motto  
[www.software.ac.uk](http://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?

- Chris Cave-Ayland: iSolutions, UoS
- Steve Crouch: Research Software Group, UoS
- James Graham: Research Software Group, UoS
- John Robinson: Research Software Group, UoS

# Bash Shell

- Day 1 - AM
- Chris Cave-Ayland
- Automation
- Not just about learning commands
- Learning just a few things can make a huge difference to productivity

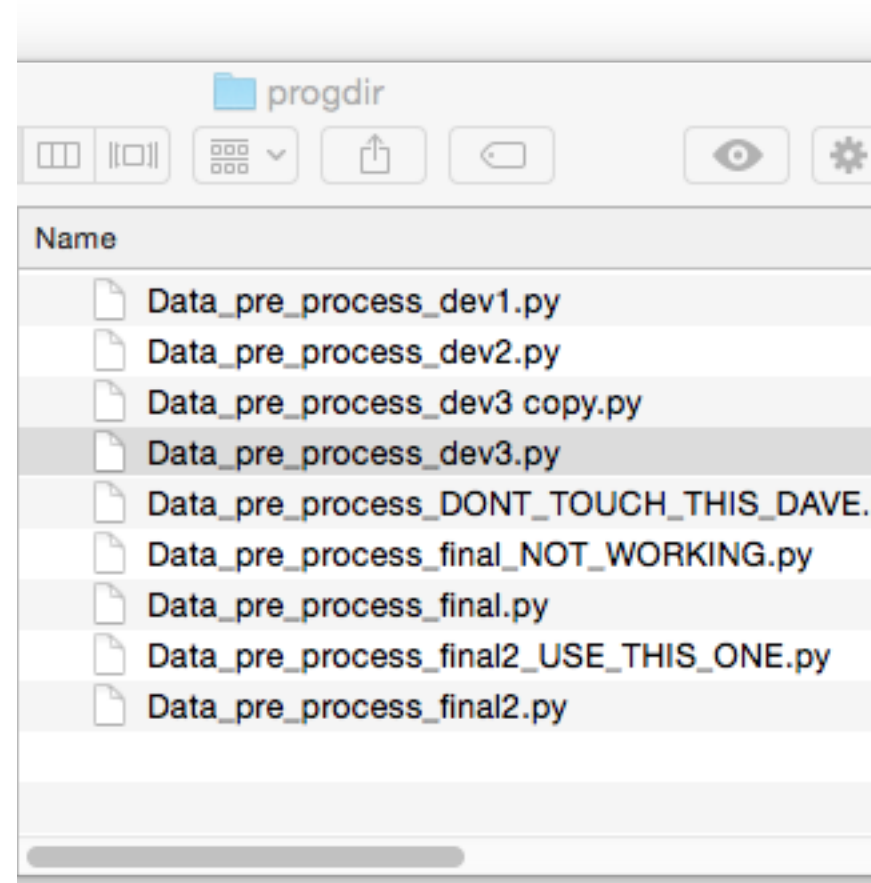




- Day 1 - PM
  - James Graham
- Day 2 - AM
  - Steve Crouch
- Beyond syntax...
- How to build programs step-by-step
- Comprehensive, reusable, testable

# 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/>

## Code of 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](mailto: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 [the Geek Feminism Wiki](#).*



Need help?



***Say hi to your neighbours!***

# Need help?



***Sticky notes***



Need help?



***Ask the group in:***

***<https://public.etherpad-mozilla.org/p/SWC-Soton-Sep2018>***

# Pre-workshop Survey

- Help us to help you, by telling us what you know
- 5 Questions / 1 min

**<https://tinyurl.com/swc-nexuss-presurvey>**