

Software Carpentry

When you arrive...

- Please fill in the pre-assessment workshop survey if you haven't already

<http://bit.ly/SWCPreSurveyNov2017>

- Go to the shared Etherpad and follow the set up instructions

<http://bit.ly/EtherNov17>



Software Carpentry

Southampton – Old Thorns Manor Hotel

November 8-9 2017

Alistair Bailey, Arshad Emmambux, Steve Crouch, John
Robinson

Housekeeping



- No scheduled fire drills today!
 - Pre-alarm for staff, but continuous ring means evacuate
- Evacuation route
 - Out door, to the right, down stairs to fire exit
 - Secondary exit out door to the right, downstairs from balcony
 - Meet in car park
- Toilets – bar area downstairs on left, near the stairs
- Tea, coffee, pastries provided at breaks!

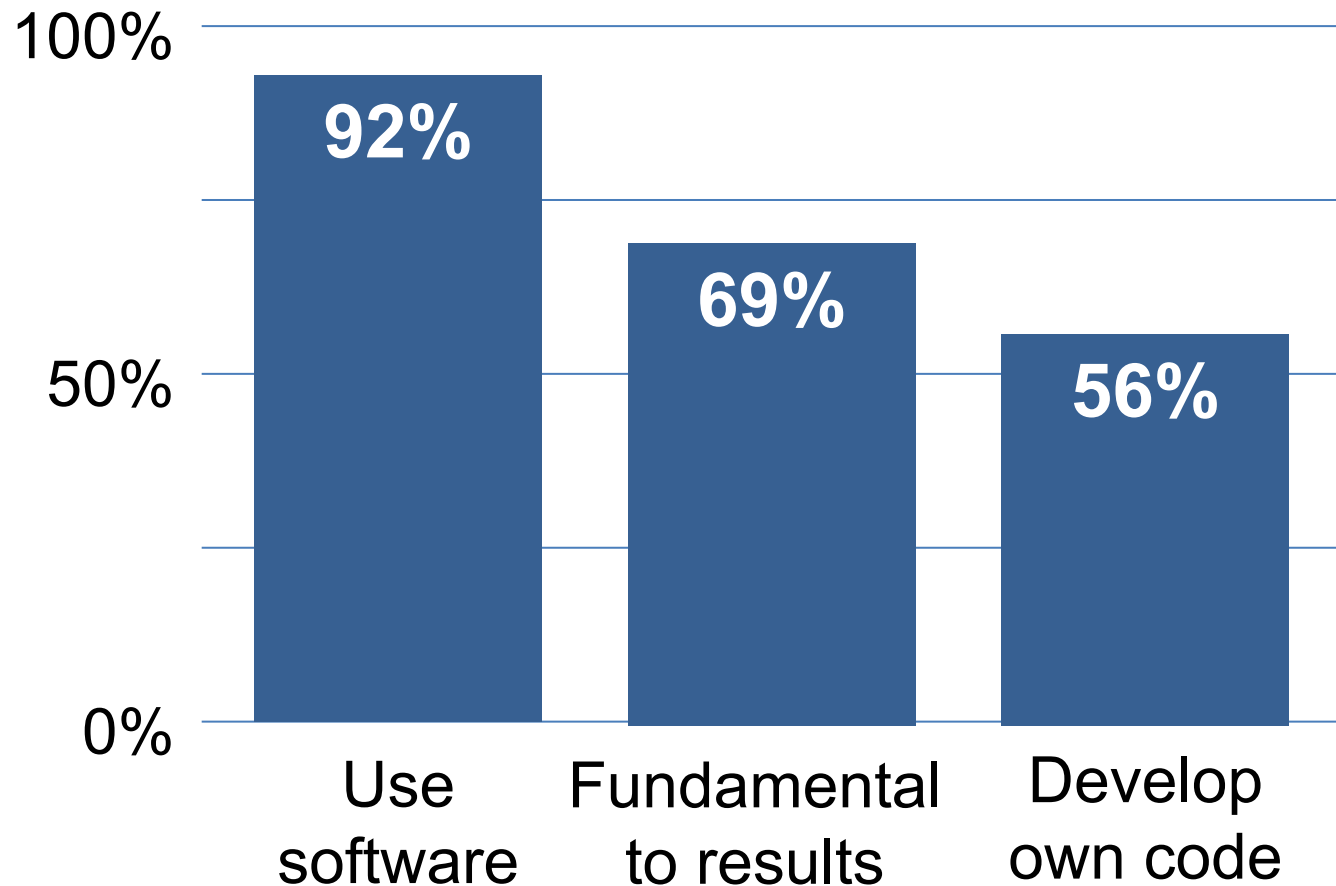
Why are we here?

Researchers who write software!



- Confess!
 - Who's main job isn't producing code/software (e.g. researcher)?
 - Who writes software to support research?
 - Who would find it impractical or impossible to do their main job without writing software?

We should care about software!



Who are we?

To help you learninate...



- Instructors
 - Alistair Bailey
 - Arshad Emmambux
 - Steve Crouch
 - John Robinson
- Helpers
 - Dan Locke
 - James Richings
 - James Graham

www.rsg.soton.ac.uk

- Based in Electronics and Computer Science
- We help to improve software developed by researchers at Southampton, through:
 - **Direct collaboration:** we provide skilled Research Software Engineers for projects
 - **Software development skills training:** through Software & Data Carpentry workshops
- Led by Simon Hettrick & John Robinson
- Contact
 - rsg-info@soton.ac.uk

Software Sustainability Institute



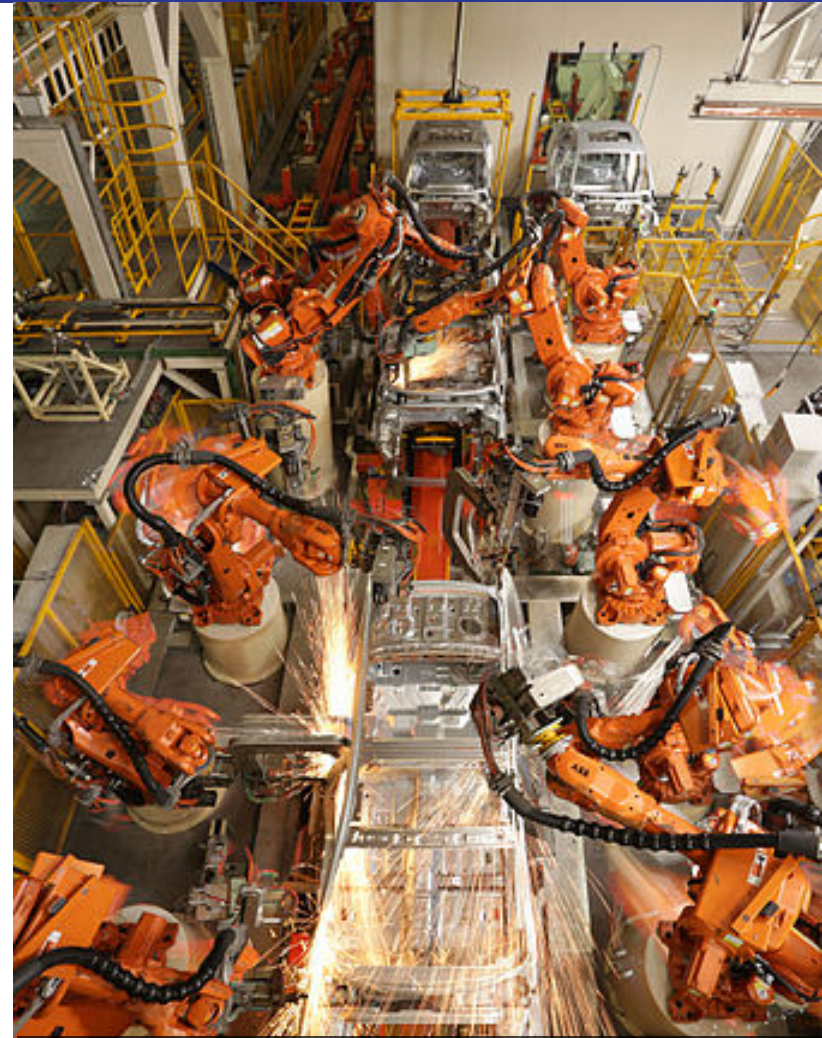
www.software.ac.uk

Cultivate world-class research with software

What are we going to learn?

Automation

- Bash Shell
- Not just about learning commands
- Learning just a few things can make a huge difference



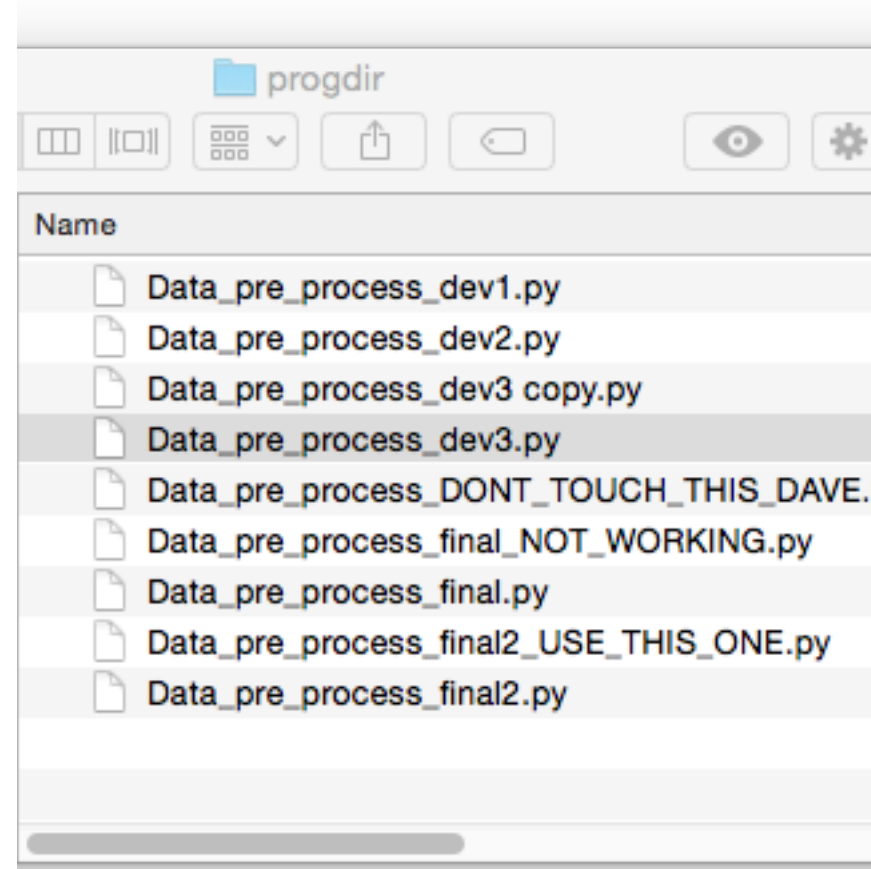
Python



- Beyond syntax...
- How to build programs step-by-step
- Comprehensive, reusable, testable

Version Control

- Git
- How has this code changed?
- Who made this change?
- Which version of this code was used to generate this result?



Agenda



10:15-13:00

(Alistair)

Automating tasks with the Bash shell

11:00-11:20 Break

13:00-14:00

Lunch

14:00-16:45

(Arshad)

Building programs with Python

15:00-15:15 Break

16:45-17:00

Wrap-up

Agenda



10:00-13:00

**Writing robust code and unit testing
with Python**

(Steve)

11:00-11:20 Break

13:00-14:00

Lunch

14:00-16:45

Version control with Git

(John)

15:00-15:20 Break

16:45-17:00

Wrap-up

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. 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?



Michael Arrighi

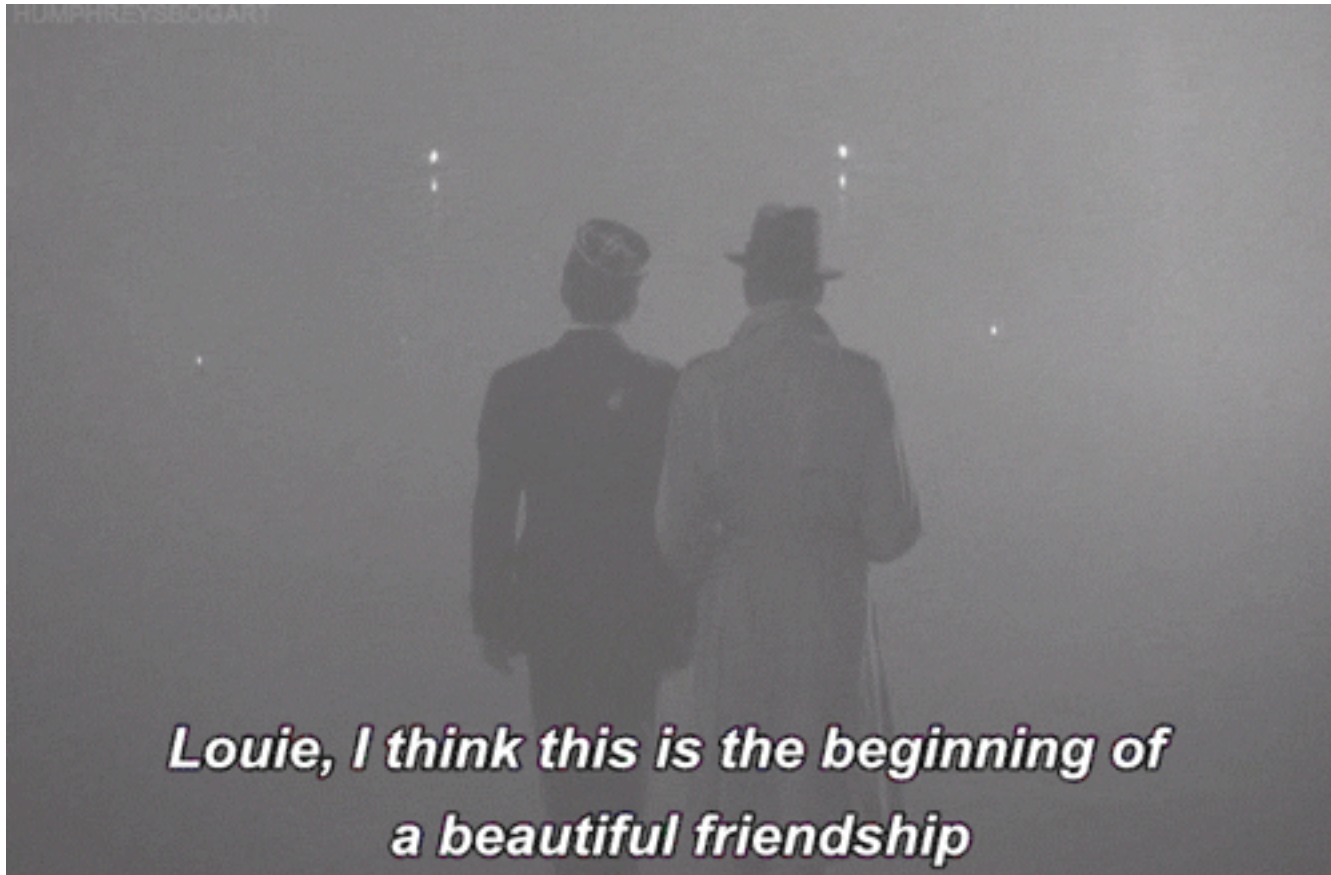
Sticky notes

Need help?



Ask the group in Etherpad
<http://bit.ly/EtherNov17>

That's all from me...



***Louie, I think this is the beginning of
a beautiful friendship***

...but for you, just the beginning!

Software Carpentry Day 2

When you arrive...

- Please check you can do the following...
- Open a terminal as we did yesterday
- Ensure you are in the 2017-11-08-southampton-swc/novice/python directory (where we left you yesterday)

```
$ cd 2017-11-08-southampton-swc/novice/python
```

- Run the Python interpreter as we did yesterday...

```
$ python
```

- At the >>> prompt...

```
>>> import numpy
```

```
>>> import matplotlib
```

- (The second one may take some time!)
- If you encounter any errors, please seek a helper