Thematic Research Training 2020-2021

Health group Session 1: Coding for biologists

Online, 13th January 2021, 12:00–17:00

Online Collaborate link:
https://eu.bbcollab.com/guest/3901b93a7a104beeab8d35966655125d

Session Description

The session aims to introduce EASTBIO PhD students to various coding / programming software available, which may benefit their PhD projects. We will have accomplished scientists discussing coding and its benefits to biologists, as well as fellow students who have benefited from learning a coding language themselves.

Session requirements:

Download R before the session – instructions at bottom of page

Session Schedule:

Times	Sessions
12:00 – 12:15	**Introduction and Outline of session** Josh Richards / Dr Henry McSorley
12:15 – 13:00	**Dr Al Ivens – An introduction to coding for biologists** University of Edinburgh
13:00 – 13:15	**Student Talks – Learning Python for your project's bioinformatics needs** Emma Hobbs @ University of St Andrews
13:15 -13:30	Screen break
13:30 – 13:45	**Student Talks – R for Statistical Analysis** Jamie Weir @ University of Edinburgh
13:45 – 15:30	**Coding Exercises in R – Session run by Professor Stephen Hubbard** (University of Dundee) Students grouped into breakout rooms – mentors can circulate rooms to provide help if needed.
15:30 -15:45	Screen break
16:00 – 16:15	**Student Talks – Designing a public engagement game' coding with Scratch –** Anastasia Leligdowicz @ University of Aberdeen
16:15 – 16:30	**Student Talks - Python for big data** Vivien Shek @ University of Dundee
16:30 – 17:00	**Summary: intended outcomes' good resources' future directions' help going forward, etc.** Josh Richards / Dr Henry McSorley

Use the following link: https://www.r-project.org

Instructions from:
Rob Thomas, *Data Analysis with R statistical Software: A Guidebook for Scientists*

Obtaining and Installing R on a PC
To install the R software on your computer, follow this simple recipe.

1. Go to the R-project homepage: http://www.r-project.org/ Bookmark this page as it contains lots of very useful links!
2. On the left hand panel, just below the title "Download", click on the word "**CRAN**", to get to a page of countries.
3. Scroll down to UK (or wherever you are), and click on the most local option: e.g. http://www.stats.bris.ac.uk/R/
4. Click on the version of R that is appropriate for your computer's operating system: **Windows / Linux**
5. Click on the "**base**" subdirectory.
6. Click on the link to the R setup program, e.g. "**Download R-3.02.1 for windows**" (or whatever is the latest version at the time).
7. When prompted, save the program to a folder on your computer's hard-drive, e.g. **C:Program Files/R setup**
8. Open this folder and click on the "**setup**" file. Then, agree to everything! If offered the choice, select "default installation" or say "no" to customising the start-up options and say "yes" to a shortcut icon on your desktop.
9. Try to control your excitement.
10. You can now click on the desktop icon (a big blue letter "R" funnily

    enough) to start using R.

Obtaining and Installing R on a Mac
1. Go to the R-project homepage: http://www.r-project.org/ Bookmark this page as it contains lots of very useful links!
2. Under the heading "Download and Install R", click on the link to "Download R for (Mac) OS X".
3. Scroll down and click on the link to download the current version of R e.g. **R-3.2.0.pgk** (or whatever is the latest version at the time).
4. Click on the downloaded folder, to install R.
5. Click on "continue", "continue" and "agree" to the terms of the licence.
6. Select "install for all users" (its only a matter of time before the other users become Mac users too).
7. Click on "continue" and "install"; you may need to enter your Mac username and password at this point.
8. Click on "install software".
9. Take a moment to admire and reflect on your beautiful Mac; it's a Design Classic after all.
10. You can now click on the desktop icon to start using R.

Contact details of local organisers:

Josh Richards at 2435501@dundee.ac.uk

Dr Henry McSorley at hmcsorley001@dundee.ac.uk