



Hello, student!

Congratulations on your final school results and welcome to Oxford.

My name is Jill O'Reilly.

I'm an Associate Professor in Psychology and, together with my colleague Lindsay Richards I teach the course "Introduction to Probability Theory and Statistics" which makes up 1/3 of the first year for Psychology and PPL students.

In the first year statistics course we will be working with a coding language called Python. We will use Python to analyse and present data, and to better understand statistical concepts. Later in your degree you will also use Python to make experimental stimuli and tasks – it is an extremely popular coding language in the fields of neuroscience and neuroimaging, and is the technology behind most online psychology experiments.

Outside of academia, Python is one of the most popular languages used by data scientists worldwide and is a great transferable skill to have (it is actually a general purpose coding language and if you get into it, you could use it to develop web apps, control robots and almost anything else you could think of).

Most of you will not have any experience with coding and that's OK. However, you will have a much smoother ride if you do some preparatory work before coming up to Oxford in October. I therefore strongly recommend you work through an online Python Basics course such as the one I suggest below. This should take you a couple of days and if you do it before you come up, whilst you have the time to work at a relaxed pace and enough head space to take it in, you will really benefit.

I am recommending some modules on a website called datacamp.com. All the material I am recommending is free (although you do have to create an account) and runs online – you can do it in any web browser on your laptop or tablet and do not need to install software.

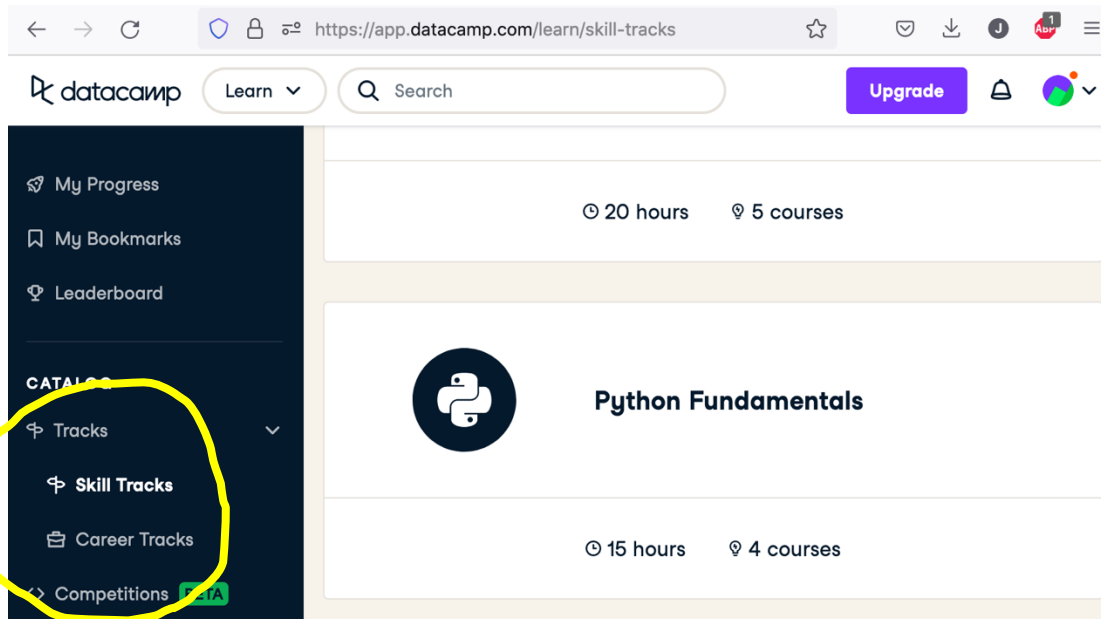
The website gives you hints and can reveal the answer if you get stuck (but try not to do this unless you have to as in coding, you learn by solving problems yourself!)

There will be a chance in the first week of term to review the preparatory work (and do a little more prep) with support from me and my team of tutors, so if you do get stuck, don't panic! But I do recommend you work through as much of the material below as you can, in advance.

Read on.....

Recommended prep work

I recommend a website called datacamp.com.



Create a (free) account and go into “skills tracks → Python”
Select **Python Fundamentals**.

Within **Python Fundamentals** there are four “courses”. I’m recommending you work through course 1 (**Introduction to Python**) and the first section of course 2 (**Intermediate Python**). That would mean covering the following (free) modules:

Introduction to Python

- Basics
- Lists
- Functions and Packages
- NumPy

Intermediate Python

- Matplotlib

According to datacamp.com, it should take you about 5 hours to work through that material, although I do think it may take longer for people unfamiliar with coding.

I’d recommend doing as many of the activities and assignments within these modules as you can – in coding, you learn by doing.

If you enjoy it, or want more practice, you could create a paid-for account at datacamp which unlocks a lot more material. However this is not necessary as prep for my course. Alternatively, there are many more online resources for learning Python. Codecademy.com is good and is free for one week (but you have to give your bank details and if you forget to cancel before the week is up you will be charged, so watch out!). W3schools is also a good reference. If you get into it, websites like Kaggle host data hacking contests where you can really hone your skills. A world of data fun awaits...!