

# DSE Week 1: Setup



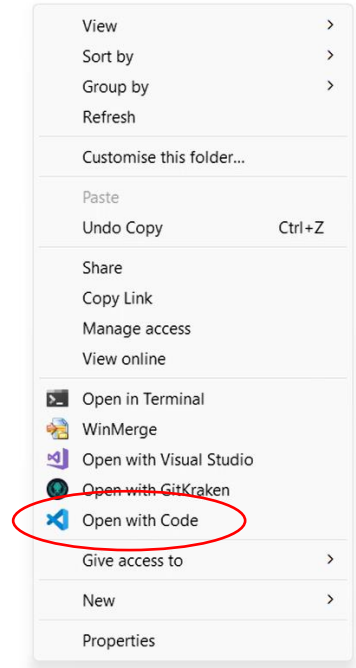
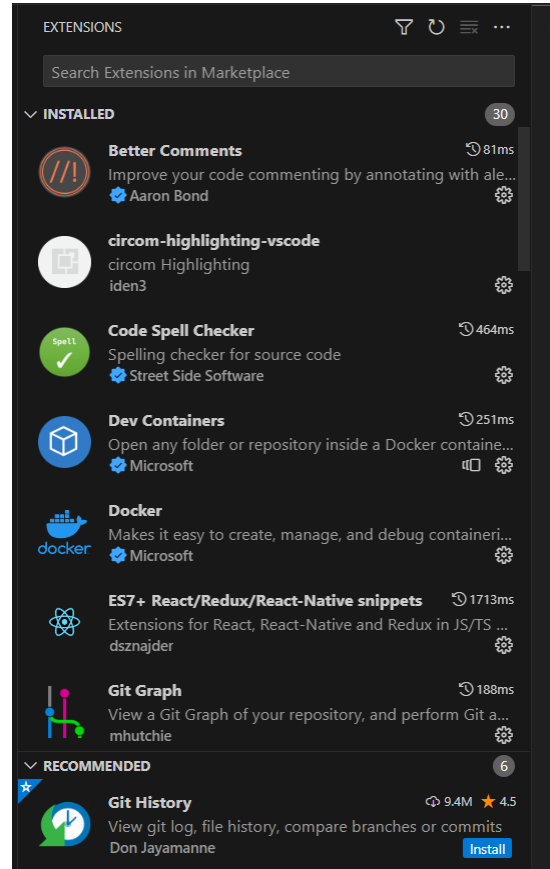
# Overview

- Install software you are going to need throughout the year:
  - VS Code
  - Python
  - Jupyter Notebook/Lab
  - Anaconda Navigator
  - Node.js
  - R/R Studio
  - Git
  - Running your first python code

# Code Editor/IDE

You can choose any code editor you like, we recommend:

- VS Code - <https://code.visualstudio.com/>
- Has lots of useful extensions
- Tip: right click in a folder to open VS Code in that folder



# Python

- Two main methods to install Python:
- Anaconda Navigator (Python + many useful packages):  
<https://www.anaconda.com/products/distribution>

OR

- Python - <https://www.python.org/downloads/>
- Install packages using pip: <https://packaging.python.org/en/latest/tutorials/installing-packages/>
- Useful packages: numpy, jupyter, matplotlib, scikit learn, pandas, scipy, ...
  - Try installing a few (we will need numpy, jupyter, and matplotlib later)
  - Syntax: `pip install <package> <package> ...`

# Verify installation

- Open your terminal
- Type: `python --version`
- If Python is installed, you should see the version (e.g. Python 3.10.2)
- Type: `pip --version`
- If pip is installed, you should see the version (e.g. pip 21.2.4 from ...)

# Try Python & Jupyter

- Download the introductory notebook [1]: [https://uob-my.sharepoint.com/:u:/g/personal/tc17231\\_bristol\\_ac\\_uk/Echbfm0-YMxIkukkVDW2nPkJBDJKxEocFf4SN7dMT3\\_GiEg?e=hPqjr](https://uob-my.sharepoint.com/:u:/g/personal/tc17231_bristol_ac_uk/Echbfm0-YMxIkukkVDW2nPkJBDJKxEocFf4SN7dMT3_GiEg?e=hPqjr)
- Run this using VS code/Anaconda/Jupyter Lab (you will need [numpy](#) and [matplotlib](#) if you are not using Anaconda)
- Optional: Install Python extension for your code editor

[1] Modified version of: <https://jupyter.org/try-jupyter/retro/notebooks/?path=notebooks/Intro.ipynb>

# Git

- For Windows: Go to <https://gitforwindows.org/>, click the download button and then install. Choose “Git from the command line and also from 3rd-party software” when asked about “Adjusting your PATH environment”
- For Mac OSX: At your command line type: ***xcode-select --install git***
- For Ubuntu/Debian Linux: At your command line type: ***sudo apt-get install git***
- For Fedora/RedHat Linux: At your command line type: ***sudo yum install git***
  
- Verify installation:
  - Open terminal
  - Run: `git --version`
  - You should see the version (e.g. git version 2.34.1.windows.1)

# Git

- Create a GitHub account - <https://github.com/>
  - *Optional:* Join Global Campus - <https://education.github.com/>
  - (also collect instructions & stickers!)
- Other alternatives include: GitLab, Bitbucket, ...
- We will learn how to use git in a later session



# JavaScript

- Node.js - <https://nodejs.org/en/download/>
- Verify installation:
  - Open terminal
  - Run: `node --version`
  - You should see the version (e.g. `node version 2.34.1.windows.1`)

# “Optional” Installations

Students taking SCEM:

- R - <https://cloud.r-project.org/> (or use Anaconda)
- R Studio - <https://rstudio.com/products/rstudio/download/> (or use Anaconda)

For LSDE, **Windows users** only:

- PuTTY - <https://www.chiark.greenend.org.uk/~sgtatham/putty/latest.html>



# Q&A

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