Jan 2025

NBIO 207A: Data Analysis
shantanu@brandeis.edu

Bring your own computer. All software that we use will be cross-platform, and should work on Windows, Mac or Linux. Matlab is available through a Brandeis License. All other software is free.

Github for class:
https://github.com/JadhavLab/2025_NBIO_207A

Cloud Folder for sharing class material:
https://www.dropbox.com/scl/fo/if6ix48s7j9xy2ddsm77z/AKQ_iDIhwTQ2h7AicpjpSX4?rlkey=d34bys90btuks1kuwzojg47r4&st=25wnfryr&dl=0

INSTRUCTIONS:

- Install **MATLAB** (need not be latest version. Post-2020 versions will be better).

- Basic knowledge of Matlab/ coding, and/ or NBIO 107A (Data Analysis and Statistics Workshop) is expected in our sessions.
If it's been a while, refresh your knowledge from NBIO 107A here:
https://dataclass.vhlab.org/

- Install **Python**. Over time, we will use some Python packages and Jupyter notebooks (web-based interactive computing notebooks, which are useful for tutorials) during the workshop. For those unfamiliar with Python, we will discuss this more in class.

I recommend a package manager like **Conda**. The Anaconda Distribution is a full featured installer that comes with a suite of packages for data science, as well as Anaconda Navigator, a GUI application.
https://docs.conda.io/projects/conda/en/latest/user-guide/install/index.html

- Make a **github** account, used for storing, managing, and sharing code. Very useful for version control. You can use command-line tools to interact with github, or I recommend **Github Desktop**, which provides a GUI. We can do a Github workshop if necessary.

- I also recommend an Integrated Development Environment such as Visual Studio Code (**VS Code**), which supports running code, debugging, code completion, etc. We will get more into this later in the course.
https://code.visualstudio.com/

- You will find the **NeuroMatch Academy Computational Neuroscience Course** (https://neuromatch.io/courses/) content here: https://compneuro.neuromatch.io/tutorials/intro.html

Some useful links for preparatory resources, especially for Python, are here:
https://compneuro.neuromatch.io/prereqs/ComputationalNeuroscience.html