Lecture 8 – Data I/O & Plotting

* Quiz / AMA / Prayer

I. Data Files

* Very often, one is required to deal with data from other sources in a variety of formats.

* Once we aquire this data, we usually need to manipulate it, and then plot it.

* Today we will deal with stored in a class of formats called "text files!"

* Text files

  - Data stored as strings / characters.
  - You can use a text editor to see the data: TextEdit (Mac), Note Pad (Win), GEdit (Linux)
  - Text files have different formats, i.e. how the data is stored. Format is usually denoted by the file extension.

    my_data.txt ← common format for a text or data file
    my_data.dat
    my_data.csv ← "comma separated value"

* Typical text file.

Header →	Name	Score	Grade
values →	Doug	60	D
	Audrey	70	C
	Andrew	80	B
	William	90	A-
	Henry	100	A

↑ delimeter : space, tab, comma, etc.
(what separates the data)

- A .txt or .dat usually have tabs or spaces as delimeters
- A .csv always has a comma as a delimeter.

II. Import and Plotting in Excel and Python

Demo 1 Import and Plot in Excel

Demo 2 Import and Plot in Python

Activity Practice Import & Plotting