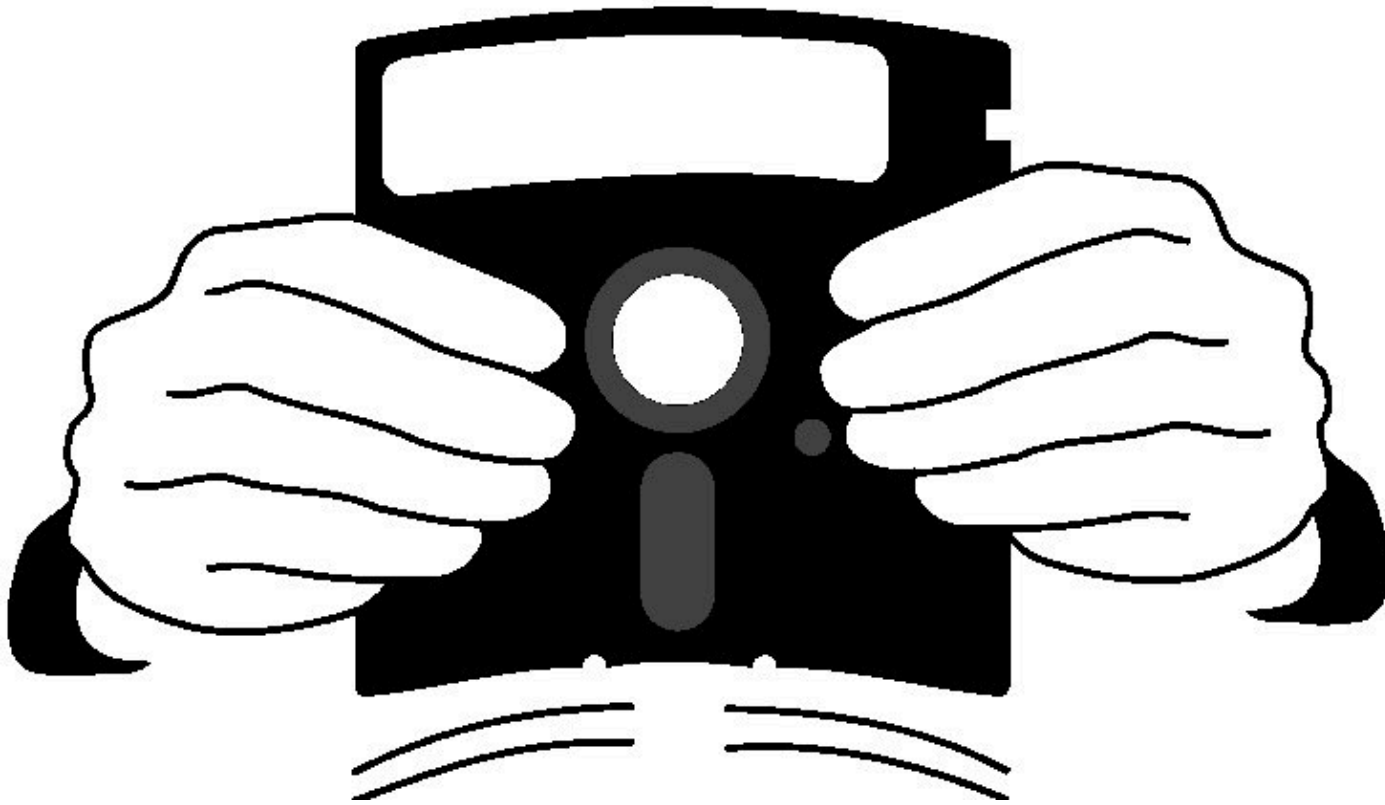


MATPLOTLIB

10.1.2018

PROBLEM SET 2



* see the github

WHAT IF YOU WANTED TO PLOT THINGS

* how would you even do that?

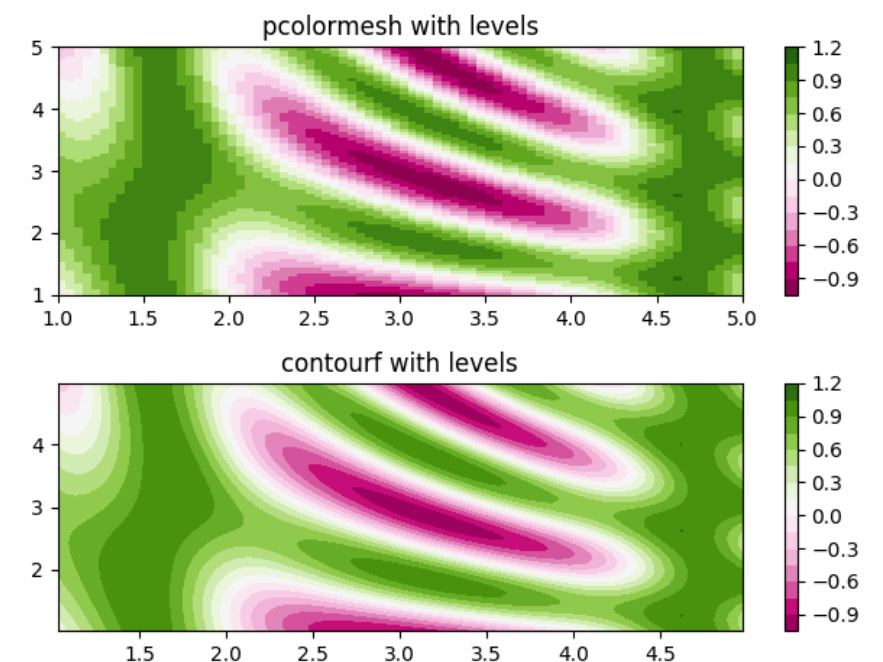
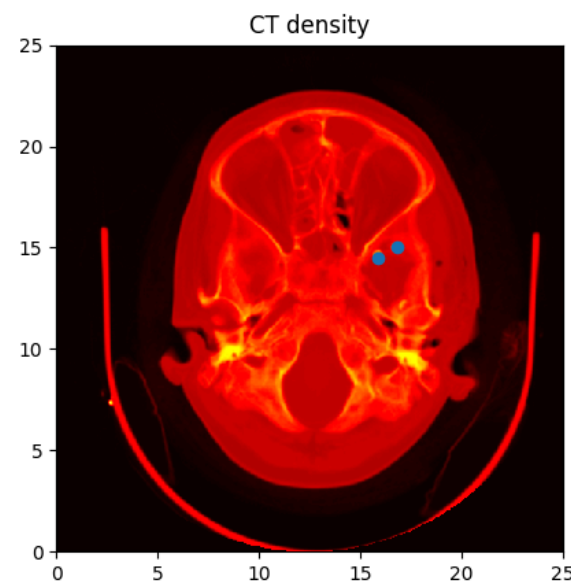
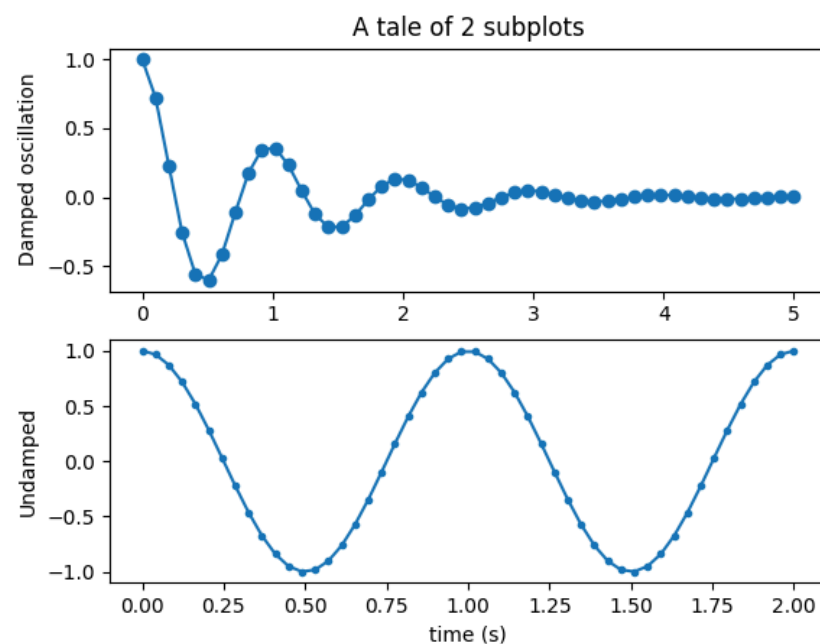


MATPLOTLIB



John Hunter

- * Plotting library for python!
- * Initially led by John Hunter (1968-2012), with first release in 2003



MATPLOTLIB READING

- * PDSH Chapter 4: <https://jakevdp.github.io/PythonDataScienceHandbook/04.00-introduction-to-matplotlib.html>

MATPLOTLIB GALLERY

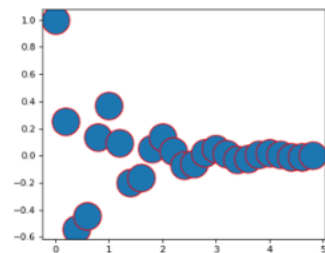
* <https://matplotlib.org/gallery/index.html>

Gallery

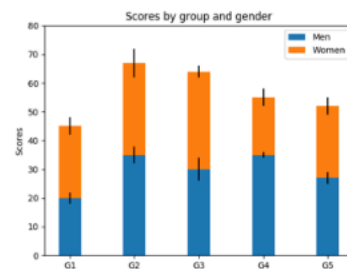
This gallery contains examples of the many things you can do with Matplotlib. Click on any image to see the full image and source code.

For longer tutorials, see our [tutorials page](#). You can also find [external resources](#) and a [FAQ](#) in our [user guide](#).

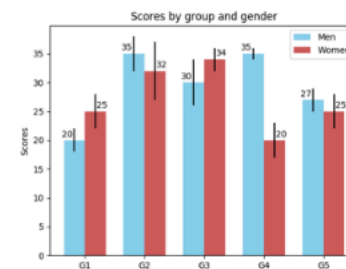
Lines, bars and markers



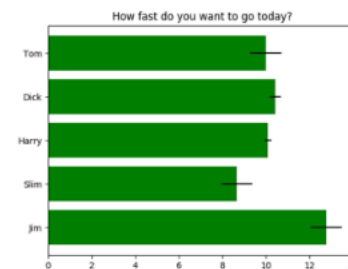
Arctest



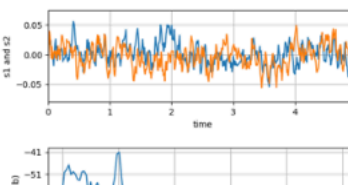
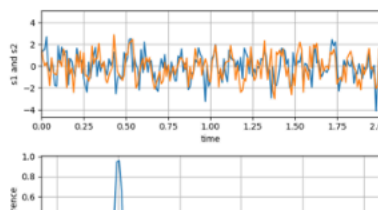
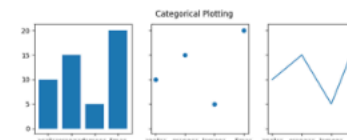
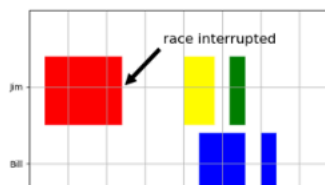
Stacked Bar Graph



Barchart



Horizontal bar chart



MATPLOTLIB

- * we will use this evocation:
- * `%matplotlib inline` *# only for notebooks!*
`from matplotlib import pyplot as plt`

MATPLOTLIB

- * The basic commands:
- * `plt.plot`
- * `plt.hist`
- * `plt.imshow` / `plt.matshow`

PLT.PLOT

- * plots a line: `plt.plot(x, y)`
- * you can change the *line* and *marker* styles by putting a “format string” after x and y: `plt.plot(x, y, fmt)`



PLT.PLOT

- * format strings usually have two parts, a marker style and a line style, e.g.:
 - # just a line (default)
 - .- # dots connected by line
 - o # just big dots
 - s: # squares w/ dotted line



PLT.HIST

- * creates a histogram: `plt.hist(data)`
- * by default it has 10 bins (you can change this)

REMINDER: DOCSTRINGS

- * docstrings ARE YOUR FRIEND
- * to see the documentation for the function “function” in jupyter notebook, run:

`function?`

- * e.g.

`plt.hist?`

END