08: matplotlib - plotting in python
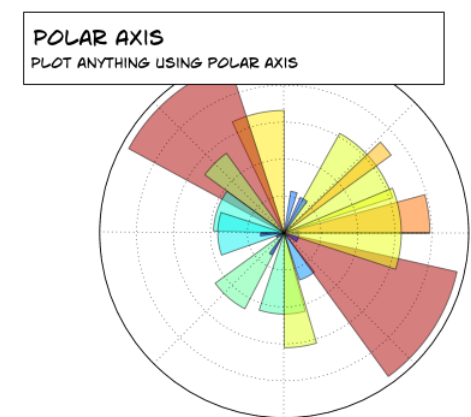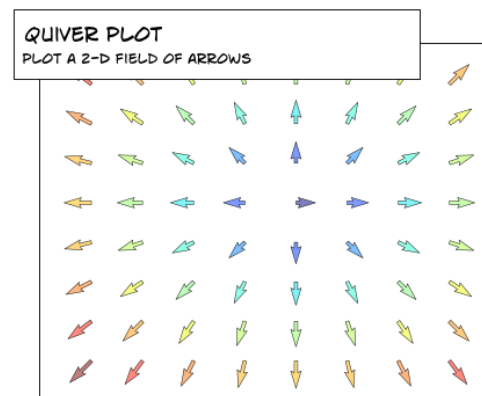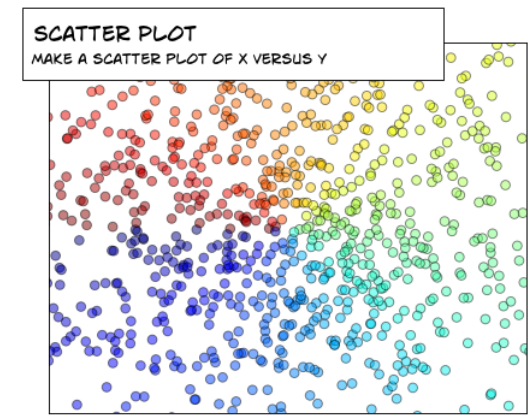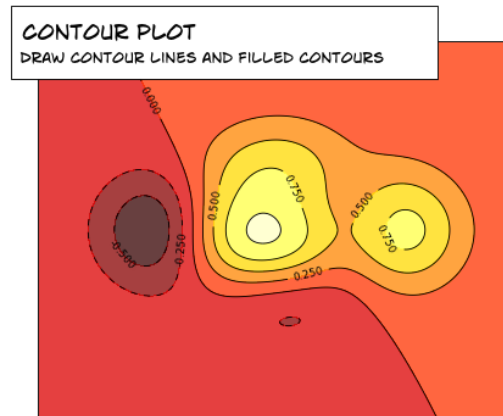
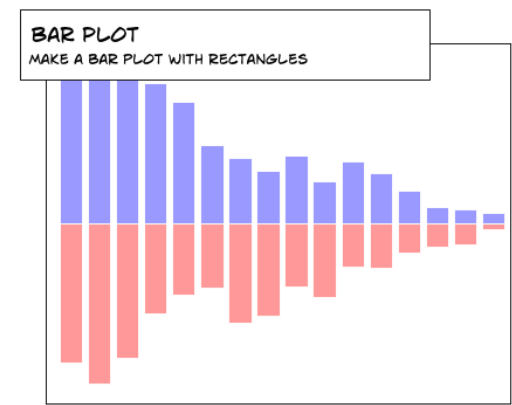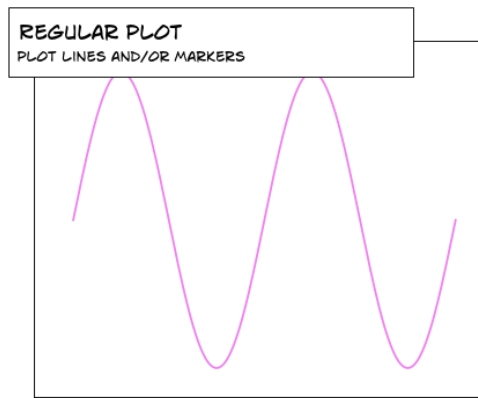https://github.com/matthiaskoenig/itbtechtalks

Dr Matthias König

Humboldt University Berlin,
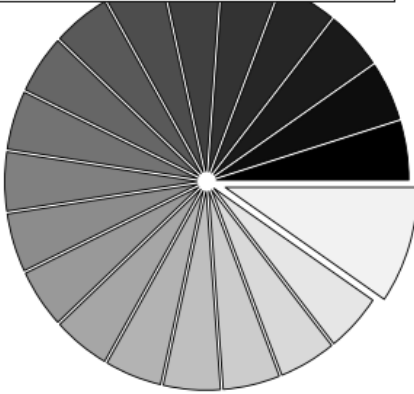Institute for Theoretical Biology

matplotlib

- python 2D plotting library
  - publication quality figures
  - wide variety of formats
  - usable in: scripts, notebooks, web application servers
- Wide range of plots
  - plots, histograms, power spectra, bar charts, error charts, scatterplots, ...
- Simple plotting
  - pyplot module provides MATLAB-like interface
- Power users
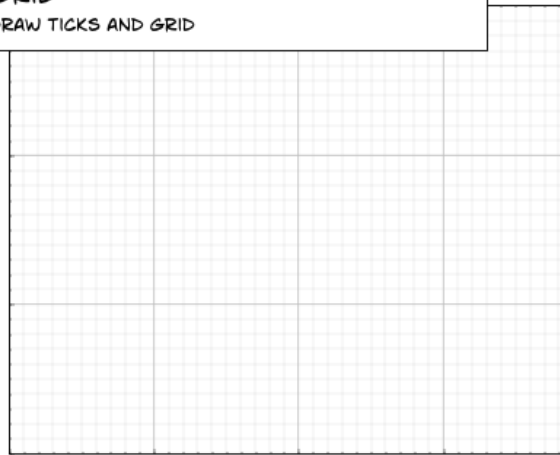 - full control of line styles, font properties, axes properties, ...

REGULAR PLOT
PLOT LINES AND/OR MARKERS

BAR PLOT
MAKE A BAR PLOT WITH RECTANGLES

CONTOUR PLOT
DRAW CONTOUR LINES AND FILLED CONTOURS

SCATTER PLOT
MAKE A SCATTER PLOT OF X VERSUS Y

QUIVER PLOT
PLOT A 2-D FIELD OF ARROWS

POLAR AXIS
PLOT ANYTHING USING POLAR AXIS

https://matplotlib.org/
http://www.labri.fr/perso/nrougier/teaching/matplotlib/

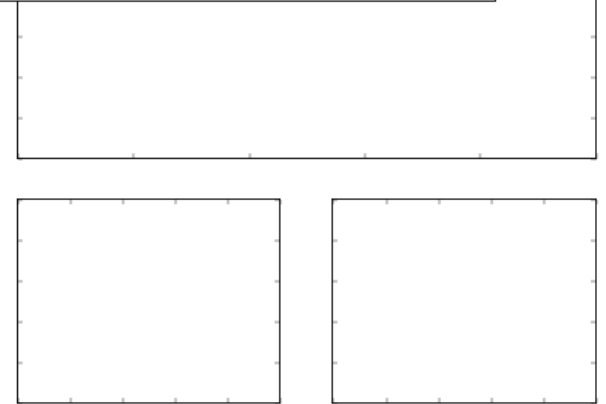## PIE CHART
MAKE A PIE CHART OF AN ARRAY

GRID
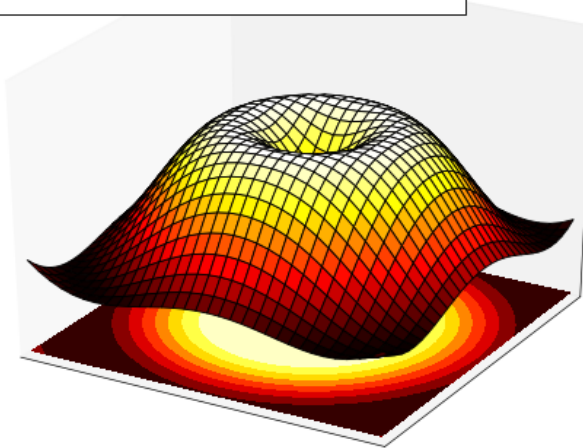DRAW TICKS AND GRID

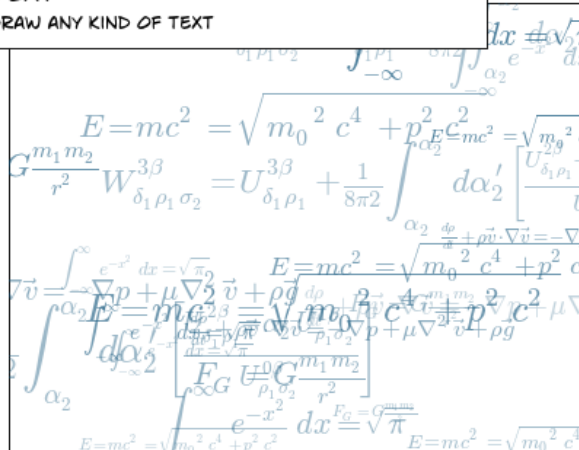## MULTIPLOT
PLOT SEVERAL PLOTS AT ONCE

3D PLOTS
PLOT 2D OR 3D DATA

TEXT
DRAW ANY KIND OF TEXT

IMSHOW
DISPLAY AN IMAGE TO CURRENT AXES