Python Workshop Series Session 7:
Plotting with MatplotLib

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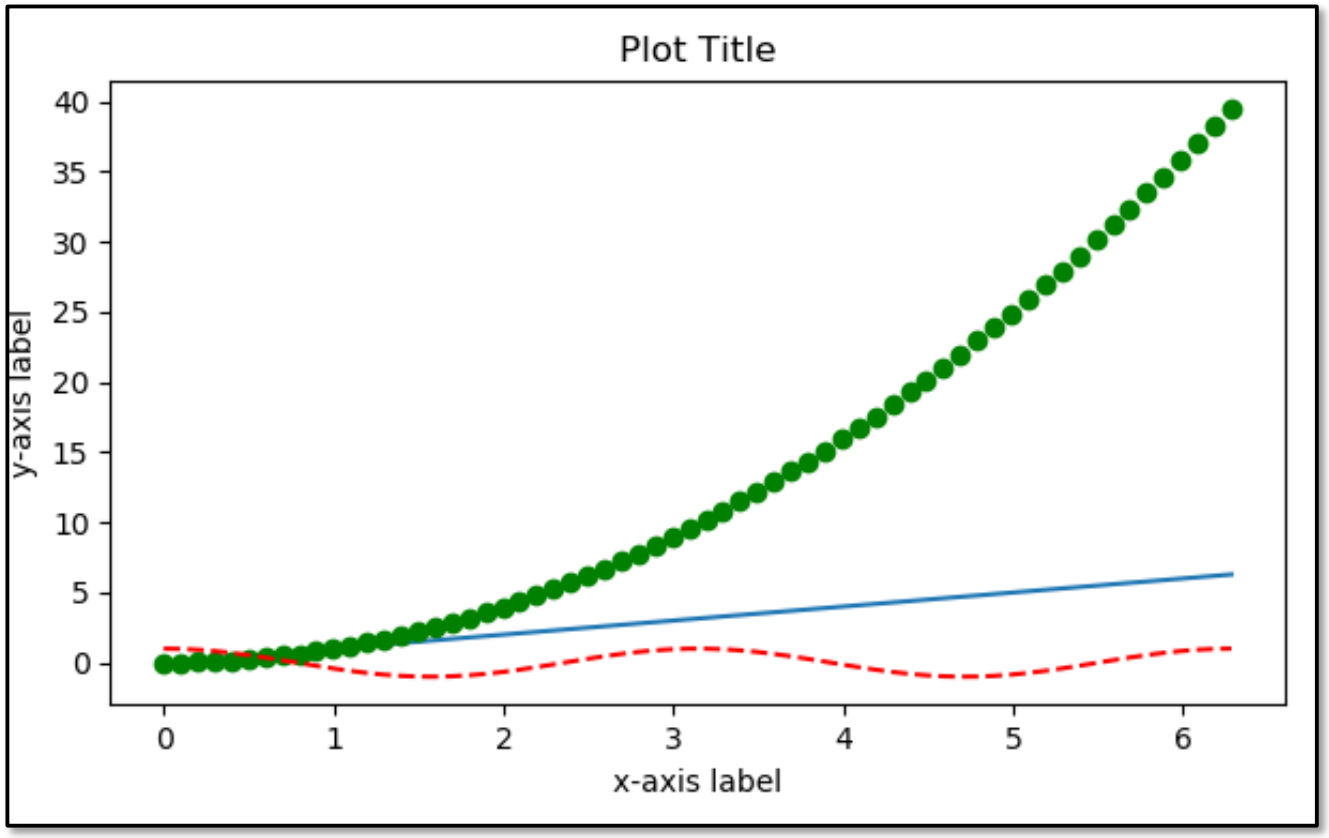
Slides: https://github.com/ResearchComputing/Python_Spring_2019

Overview

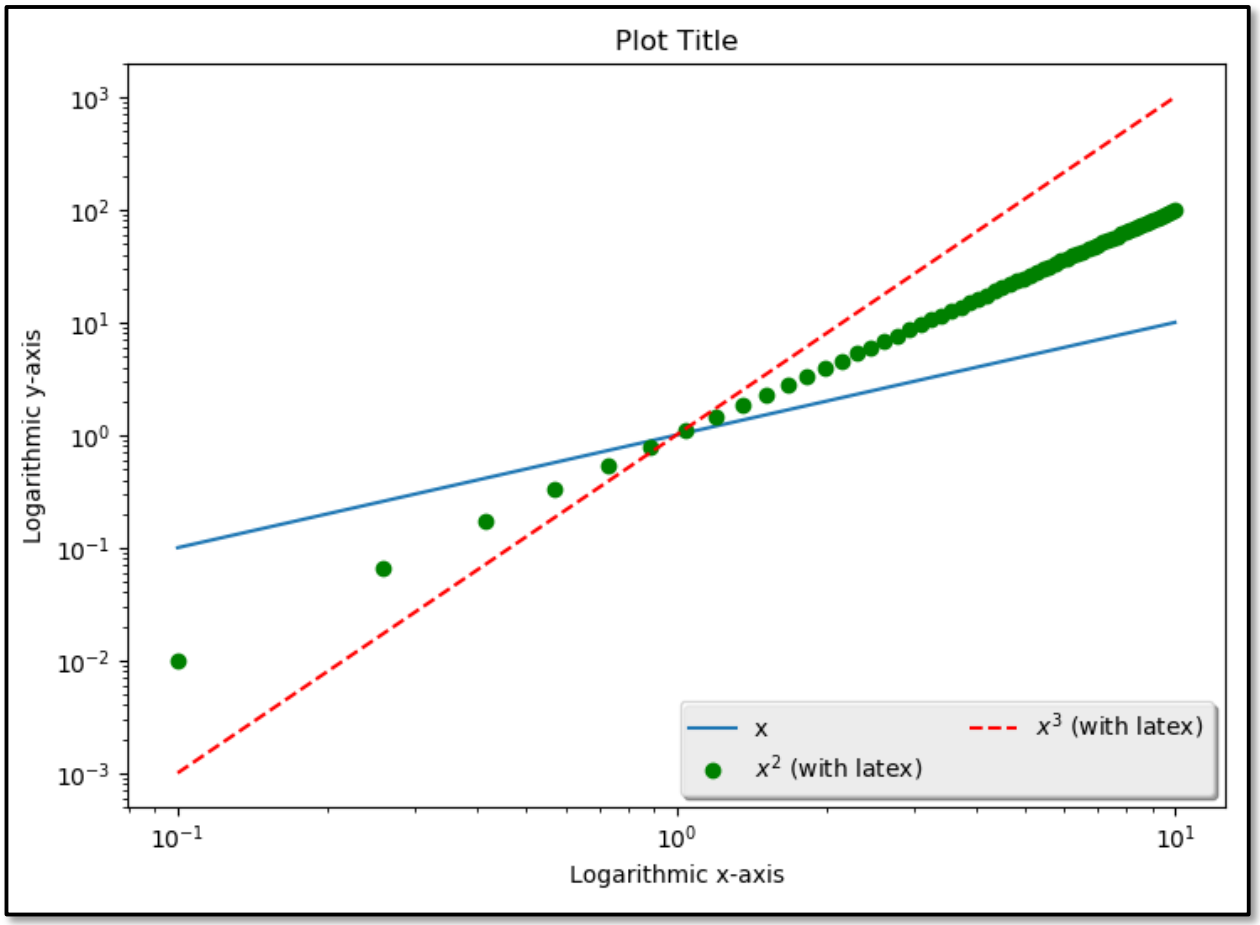
- This lesson is **example-based**.
- Matplotlib is very sophisticated
- The documentation is extensive.
  - https://matplotlib.org/
- Several examples provided online. Use them!
- Revolves around two classes:
  1. Figure class – container for plots
  2. Axes class – the plots within a figure
- Primarily work with axes methods.
- Summary of examples follows.

simple_plot.py



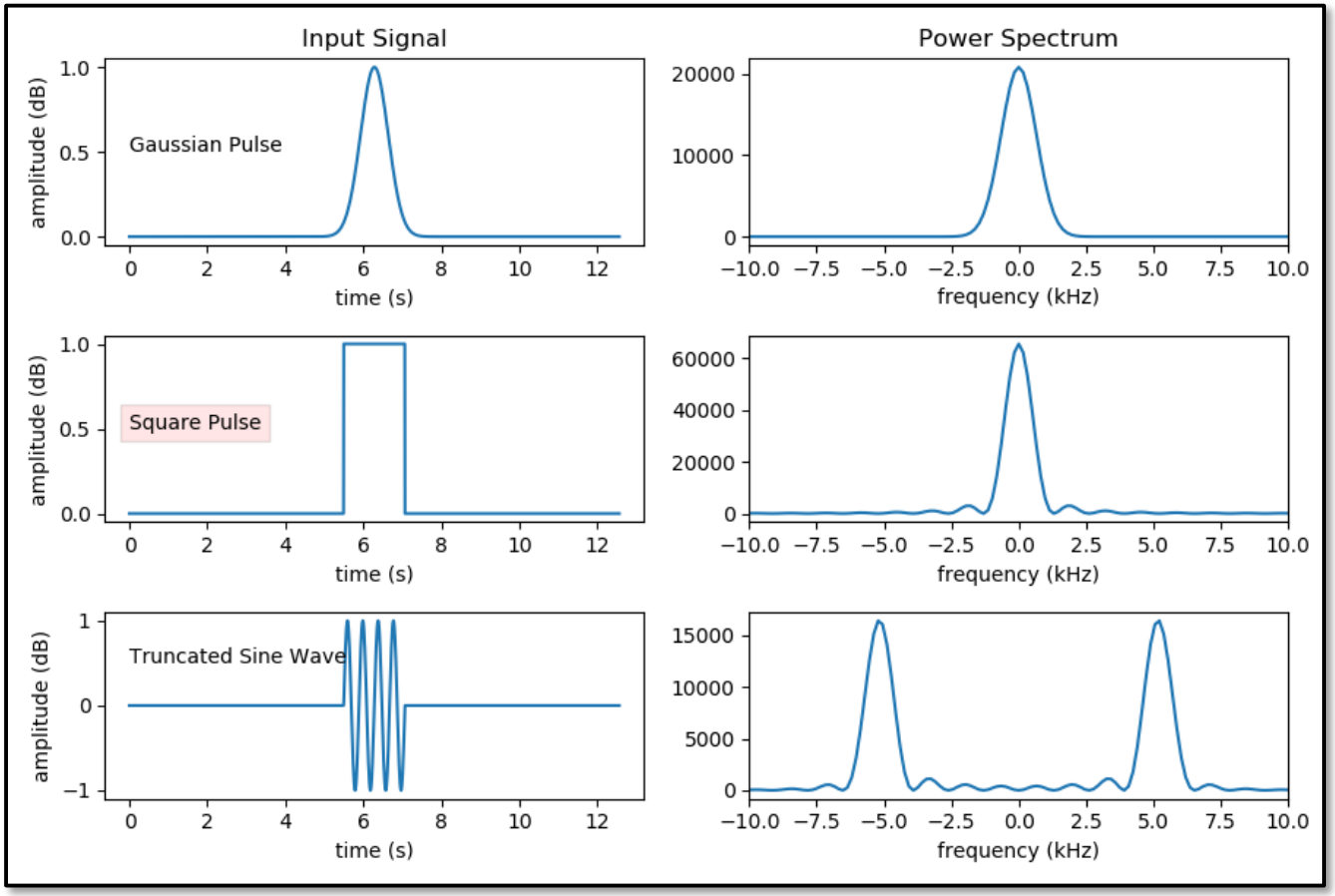
- Essential elements of plot creation

plot_legends.py



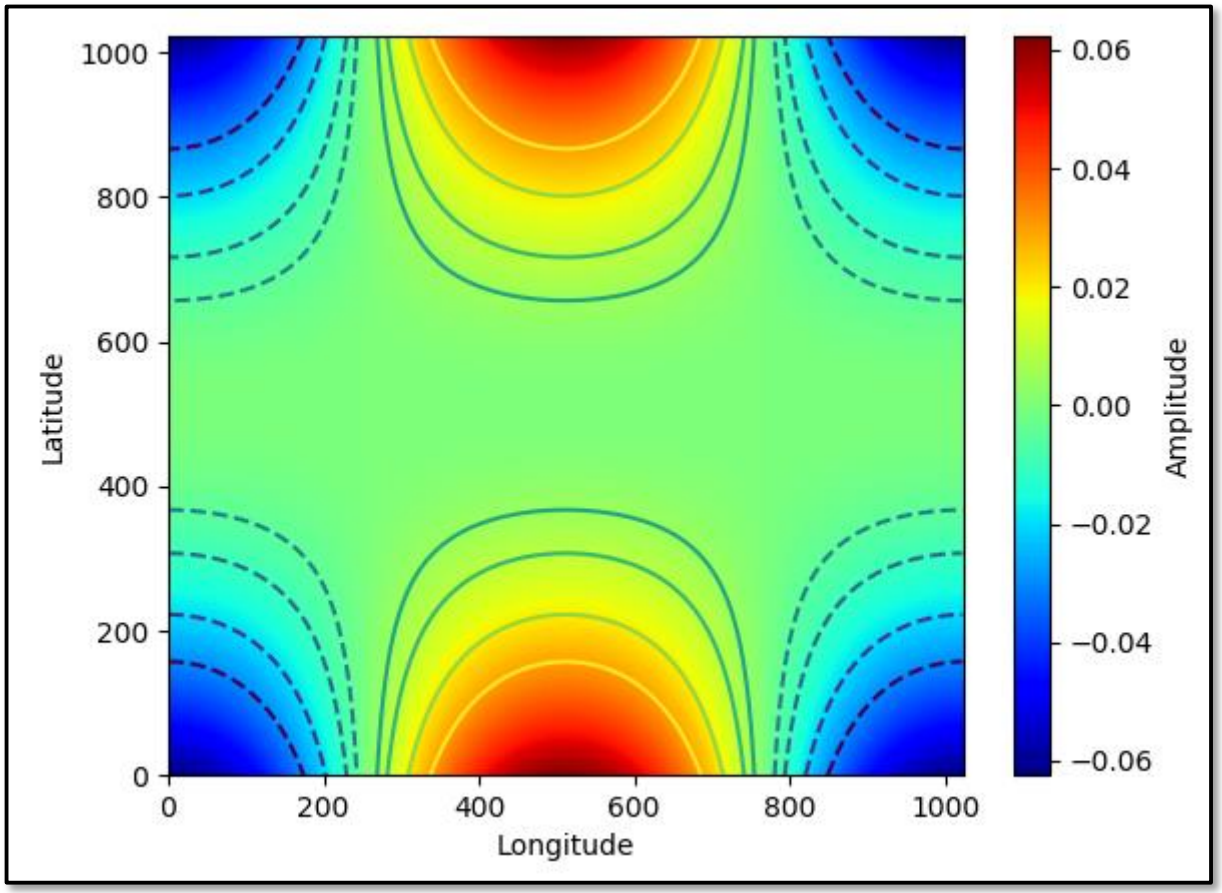
- Legend
- Logarithmic axes
- Latex math font

subplots.py



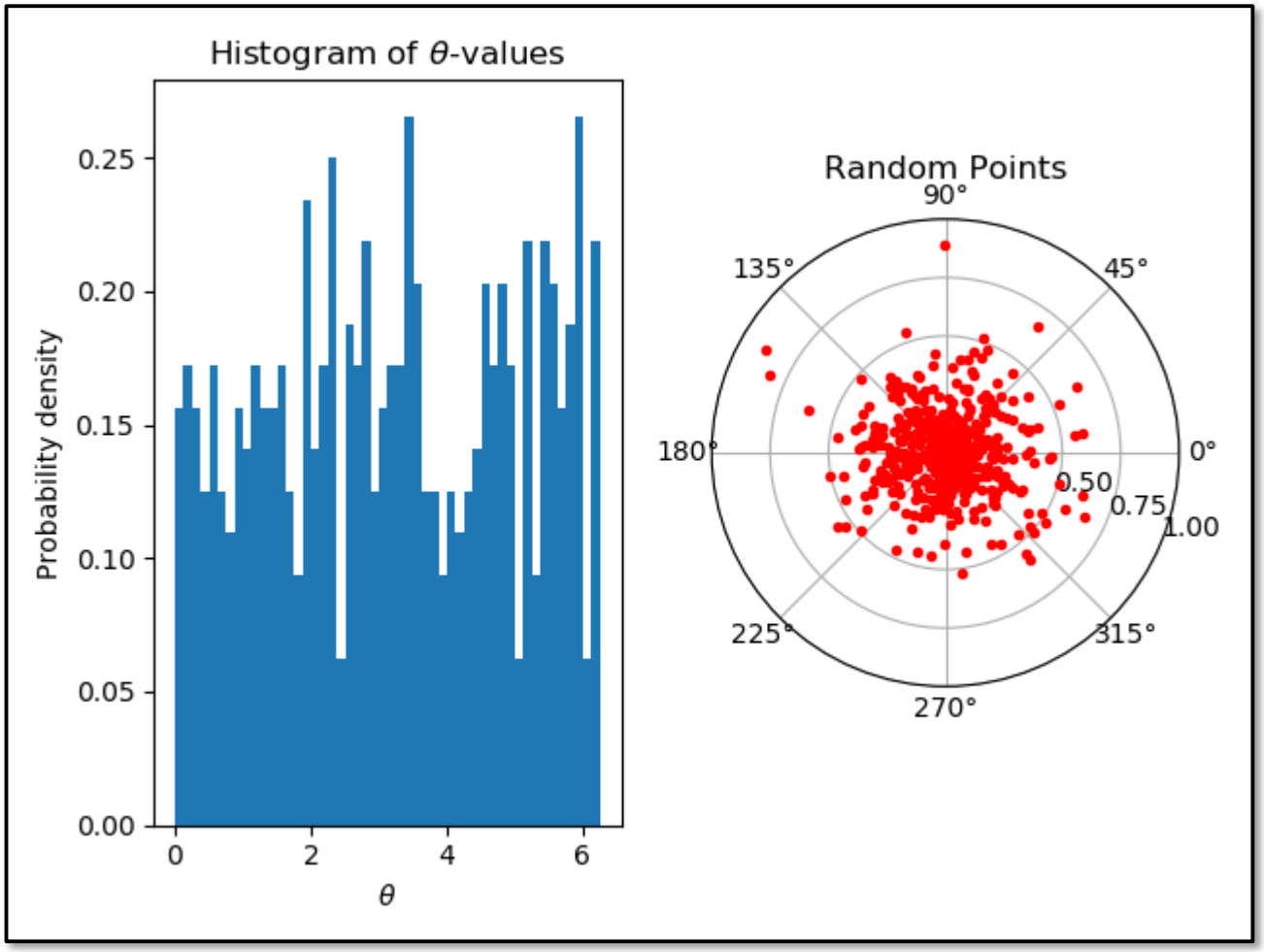
- Multiple plots
- Text annotation
- NumPy FFT example

twod_data.py



- Image display
- Drawing contours
- Colorbars

polar_histogram.py



- Histograms
- Polar plots
- Dealing with different plot projections