Python Lab

Matplotlib - I

Proteomics Informatics, Spring 2014

Week 9

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From last week…

Matplotlib

- 2D plotting library (some 3D support)
- Full-featured
- Great performance even with large amount of data
- Very easy to make simple plots, even with default properties
  - But gives complete and extensive control of every teeny element on your plot
  - Lots of graphical and text properties
- Popular Operational Modes
  - Interactive work using pylab/pyplot
  - Using the object-oriented API from a script

Interactive mode: Pyplot

- Command-style functions (like R/Matlab)
- Each function will make some change to the figure:
  - Create a figure
  - Create a plotting area
  - Throw in some lines and labels
  - Decorate the plot more with annotations etc.
- Hands on…

Next Class

- More examples from Pandas and Matplotlib:
  - Data manipulation
  - Other types of plots and their properties (scatter, histograms, boxplots etc)
  - Multiple figures, multiple plots within a figure
  - Interactive vs. batch plotting; saving figures

- **Any examples from your research?**

References

- Matplotlib User Guide and online documentation
  - Great resource!!
    - Several examples in gallery, with plot output and working python code.
  - http://matplotlib.org/contents.html
  - http://matplotlib.org/index.html