

Matplotlib II

Informatics 1 for Biomedical Engineers
Tutor Session 9

KTI, Knowledge Technologies Institute

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Today's Topics

1. Legends

- Labels
- Positioning

2. Dual Axis

3. Seaborn & Colorbrewer

Student Goals

1. Properly visualise data

- Maximise Readability
- Minimise Space

Managing the Legend

1. Function: `legend()`¹

2. Usage

- call on axis object or on the state machine
- per default using style and labels from axis

3. Important keyword arguments

- Bounding box: `bbox_to_anchor` [tuple]
- Location: `loc` [int]
- Manually define which plots are used: `handles` [list]
- Manually define labels: `labels` [list]

¹http://matplotlib.org/users/legend_guide.html

Double Axis

1. Function: `twinx()` or `twiny()` ²
2. Usage: have multiple lines on different scales in one picture

²http://matplotlib.org/api/axes_api.html

Seaborn

- Python package. Source ³
- Overrides styles in matplotlib (makes plots pretty)
 - `seaborn.set_style()` # For instance 'whitegrid'
 - `seaborn.set_palette()`
 - Accepts matplotlib color maps ⁴
 - Integrates colorbrewer
- Integrates with pandas (relevant next semester)

³<http://seaborn.pydata.org/>

⁴http://matplotlib.org/examples/color/colormaps_reference.html

Colorbrewer

- <http://colorbrewer2.org/>
- Reference for colours with regards to limitations
- Usage:
 1. Select the amount of classes you have (how many colours you need)
 2. Select the type of colour scheme (usually diverging or qualitative)
 3. Select limitations (colourblind or print friendly)
 4. Select colour scheme
- seaborn call: `color_palette("iNAME", i# classes)`