# LECTURE 26

## MATPLOTLIB II

MCS 275 Spring 2023

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# LECTURE 26: MATPLOTLIB II

Reminders and announcements:

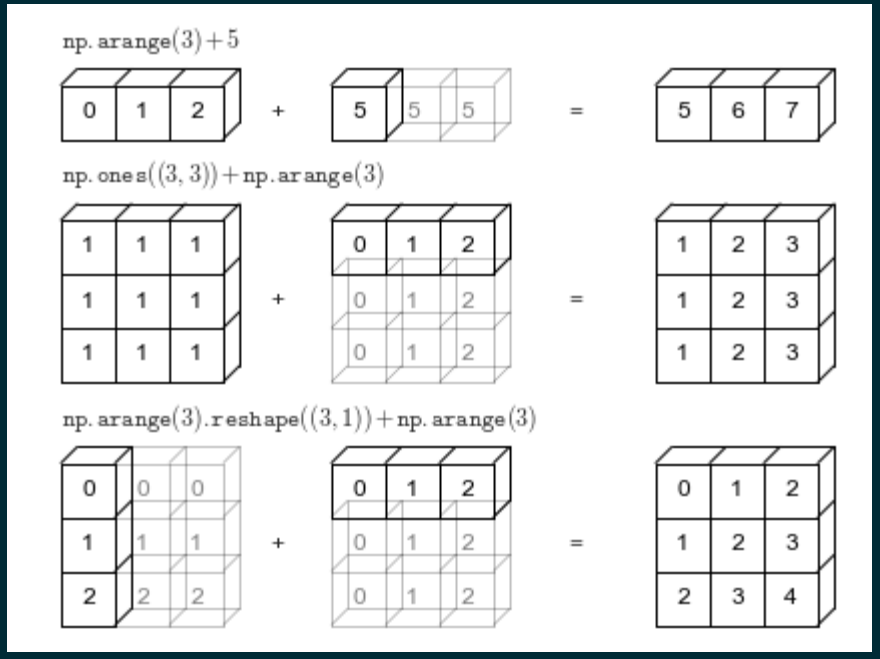
- Project 3 due today at 6pm.
- Next big topic is **databases**
- Spring break next week, no classes or office hours

# GALLERY

The matplotlib home page has a nice gallery of examples with source code. It can be especially helpful if you know what you want something to look like, but don't know what it is called.

# BROADCASTING

This figure from §2.5 of Python Data Science Handbook by Jake VanderPlas was made with Matplotlib!




And the book contains the source code!

# TODAY

- Scatter plots
- Contour plots
- Density plots

→ Matplotlib demo notebook ←

# MAIN PLOTTING COMMANDS

- **plt.plot(xvals,yvals,...)** — plot line, points, or both
- **plt.scatter(xvals,yvals,...)** — plot points with individual size/color control
- **plt.contour(xgrid,ygrid,zgrid)** — contour (topographical) map of function of (x,y)
- **plt.imshow(zgrid,extent=[...],origin="lower")** — density plot of a grid of values

Most other commands adjust or annotate plots made with these commands.

# REFERENCES

- *Python Data Science Handbook* by Jake VanderPlas
  - Chapter 2: Numpy
  - Chapter 4: Matplotlib
- matplotlib home page, including documentation.

# REVISION HISTORY

- 2022-03-18 Last semester's lecture on this topic finalized
- 2023-03-17 Updated for 2023

# Have a great spring break!