LECTURE 26

MATPLOTLIB II

MCS 275 Spring 2023

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LECTURE 26: MATPLOTLIB II

Reminders and announcements:

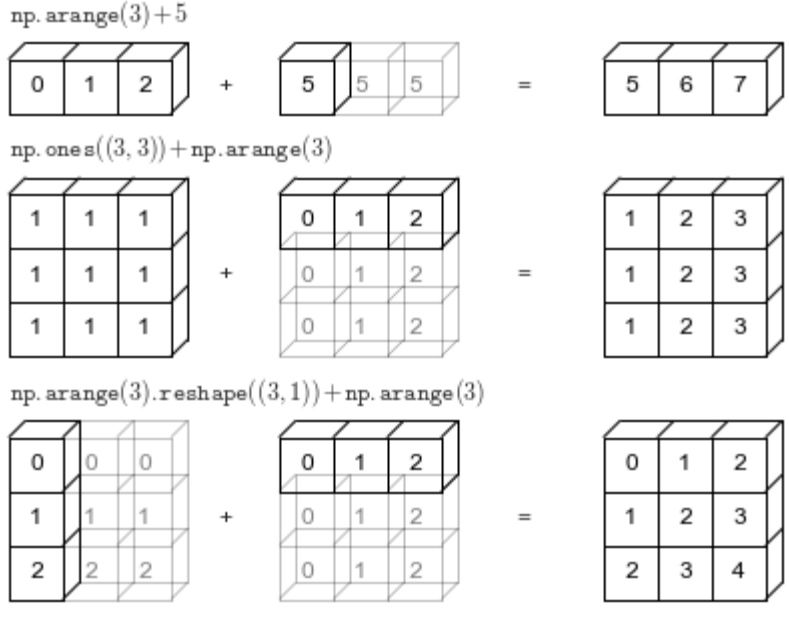
- Project 3 due today at 6pm.
- Next big topic is **databases**
- Spring break next week, no classes or office hours

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!



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

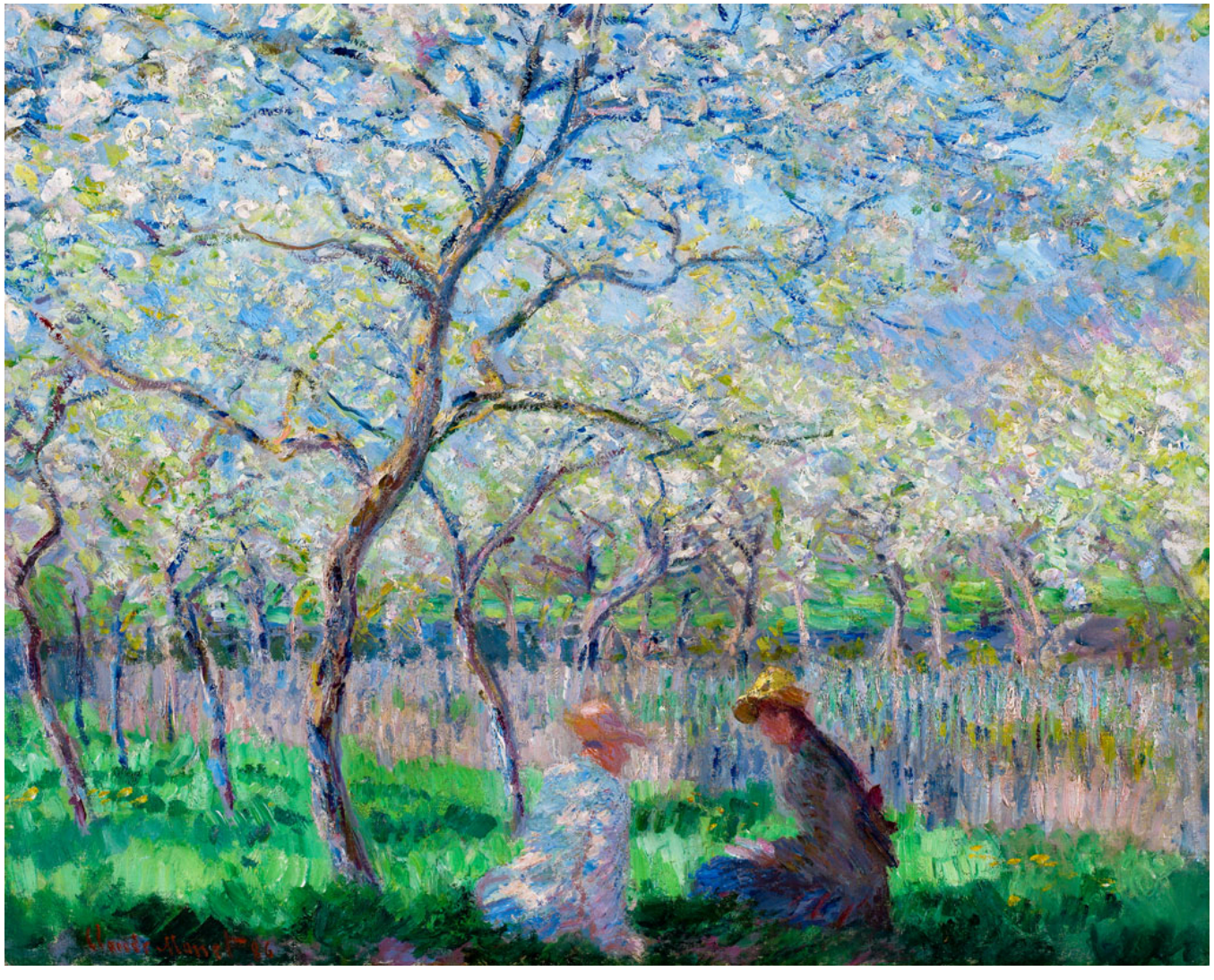
Most other commands adjust or annotate plots made with these commands.

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!