# A3 Recap, Plotting, A4

**Learning goals:**

- **Go over commonly asked questions for A3.**
- **Understand how common Python plotting libraries relate with each other.**
- **Walk through questions on A4**

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# Plotting

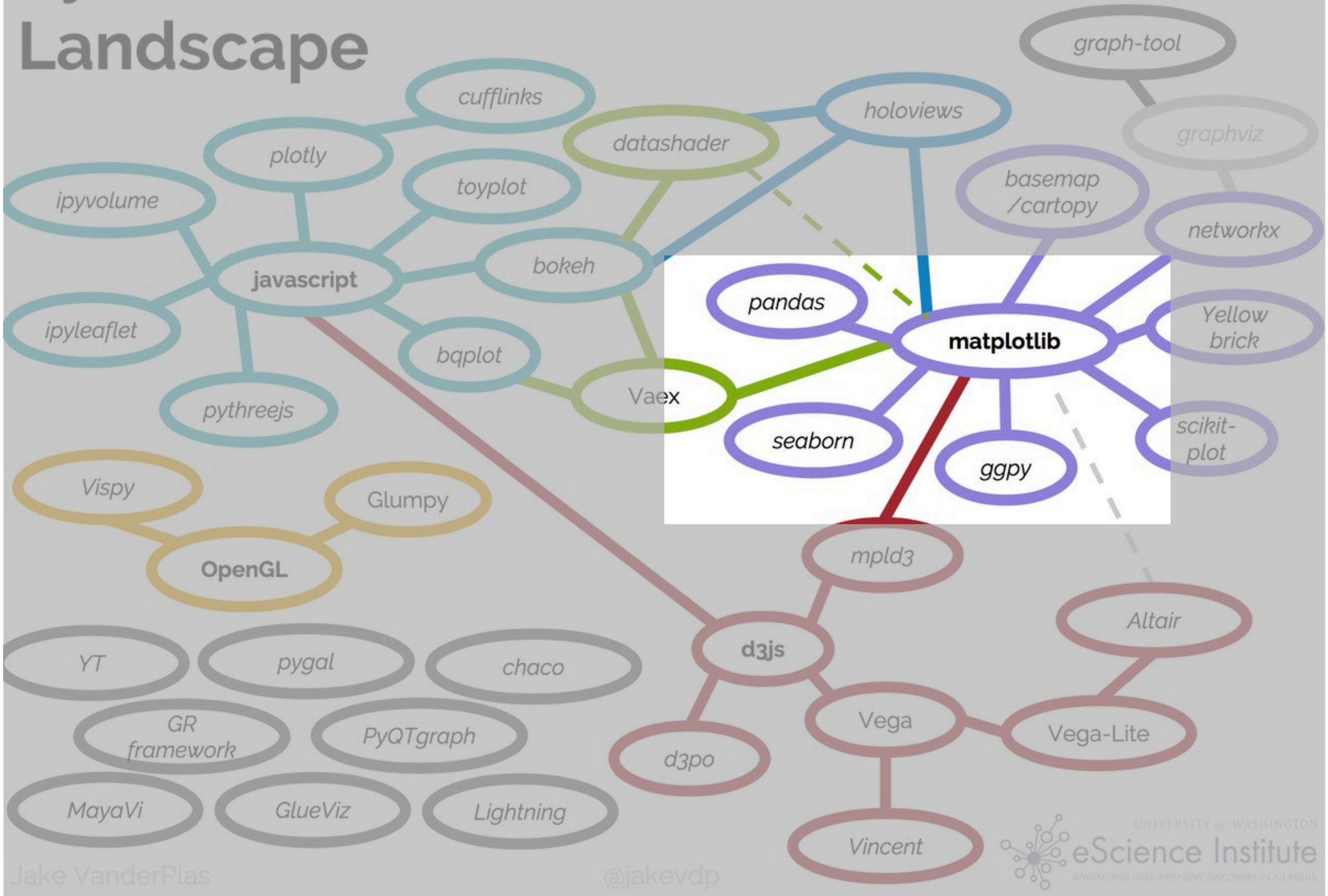
# Why are there so many ways to make the same plot?

- **All of these do the same thing:**

```
plt.hist(df['income10'], 25)
df['income10'].hist(bins=25)
df.hist('income10', bins=25)
```

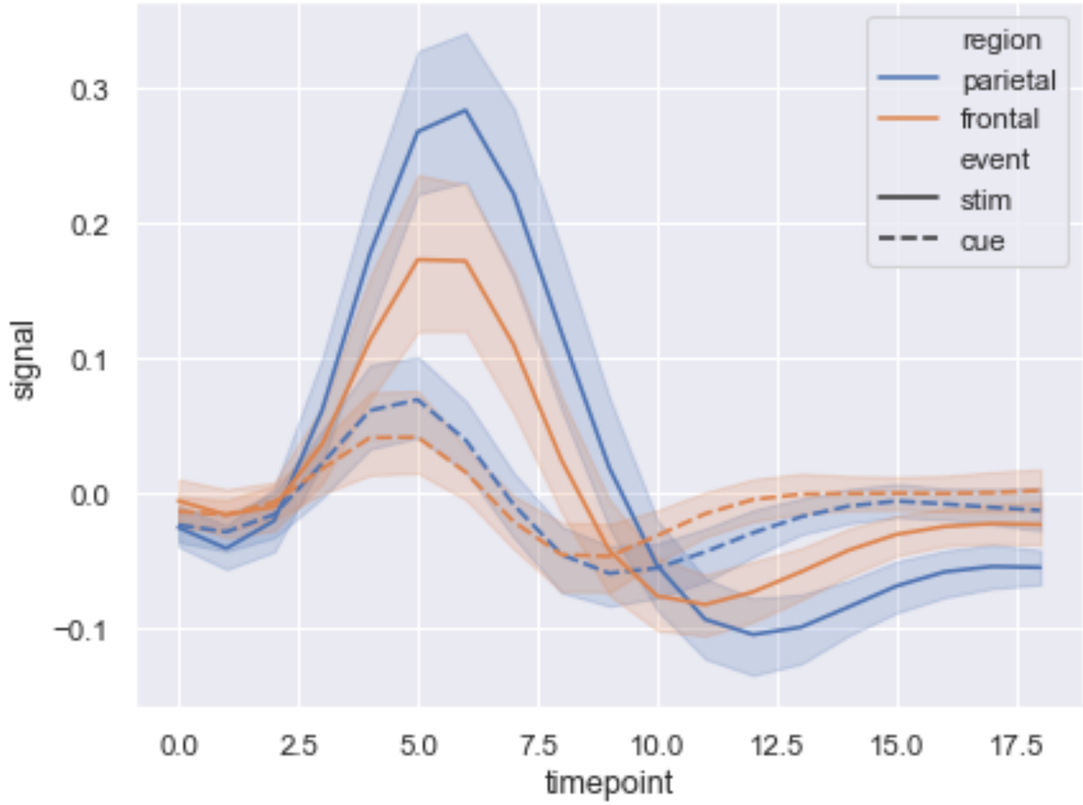
- **In Python, most image-based plots created using Matplotlib.**
  - `plt.hist` `plt.bar` `plt.plot` **etc.**
- **Pandas gives shortcuts for matplotlib plots. Lines 2 and 3 are shortcuts for line 1.**

# Python's Visualization Landscape



# Seaborn

- **My personal favorite is the seaborn library.**
- **Makes common statistical charts easy to create, like bar plots with confidence intervals.**
- **Again, seaborn is really just a bunch of shortcuts for matplotlib.**




https://seaborn.pydata.org/tutorial.html

# For more details

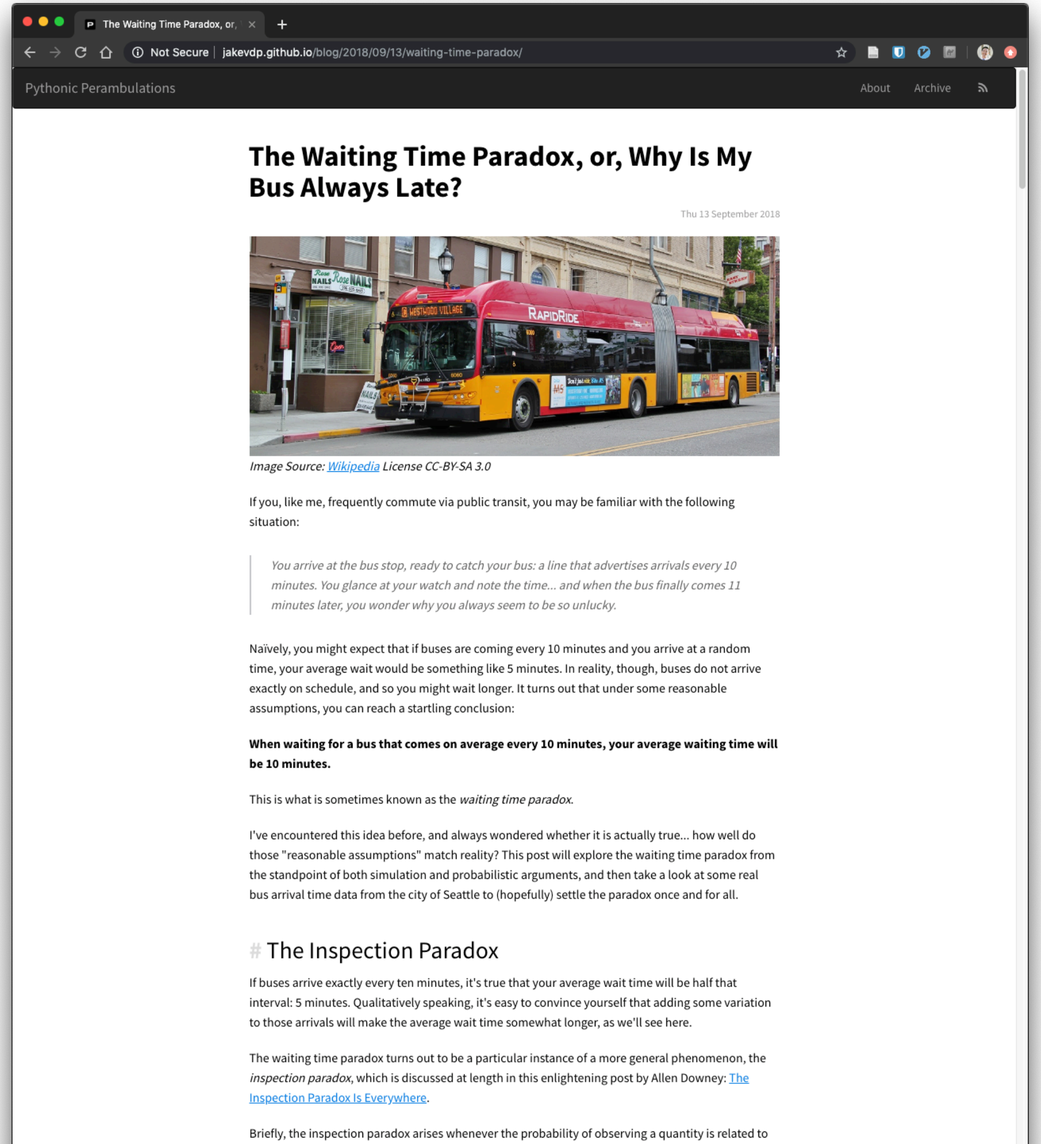
- **Making good plots is a key skill! This just scratches surface.**
- **You can get many great jobs just by being able to make informative data visualizations.**
- **For more, see Ch 6 of textbook.ds100.org.**

# A4 Walkthroughs

# Preview of next week

**An easy way to set up a personal website using Jupyter notebooks and GitHub.**

**A5 question walkthroughs**



# A4 quick tips

- 1d: Your DF cells should have `\n` at the end (same for 1e)
- 2b: Don’t manually make a new Series — slice a column out of a DF
- 2e: Use a slice with multiple boolean expressions
- 2f: Your for loop should loop through the index of a DF
- 3b: Don’t do anything to the zip column
- 3f: Loop through the DF’s index again. Your 3-digit zip codes should be stored as strings, not ints.
- Attendance: bit.ly/at-wi20