2025

4Geeks Academy: data science cohort 12

DAY 4: DATA VISUALIZATION

TODO

DATA VISUALIZATION	Cover basics of plotting with Matplotlib and Seaborn
PANDAS EXERCISES	Submit data clean up assignment (Pandas module), if you haven't already
VISUALIZATION EXERCISES	Start data visualization exercises with matplotlib and seaborn (Data Visualization module), plan to finish before class Wednesday.

TOPICS

01 PLOTTING BEST PRACTICES

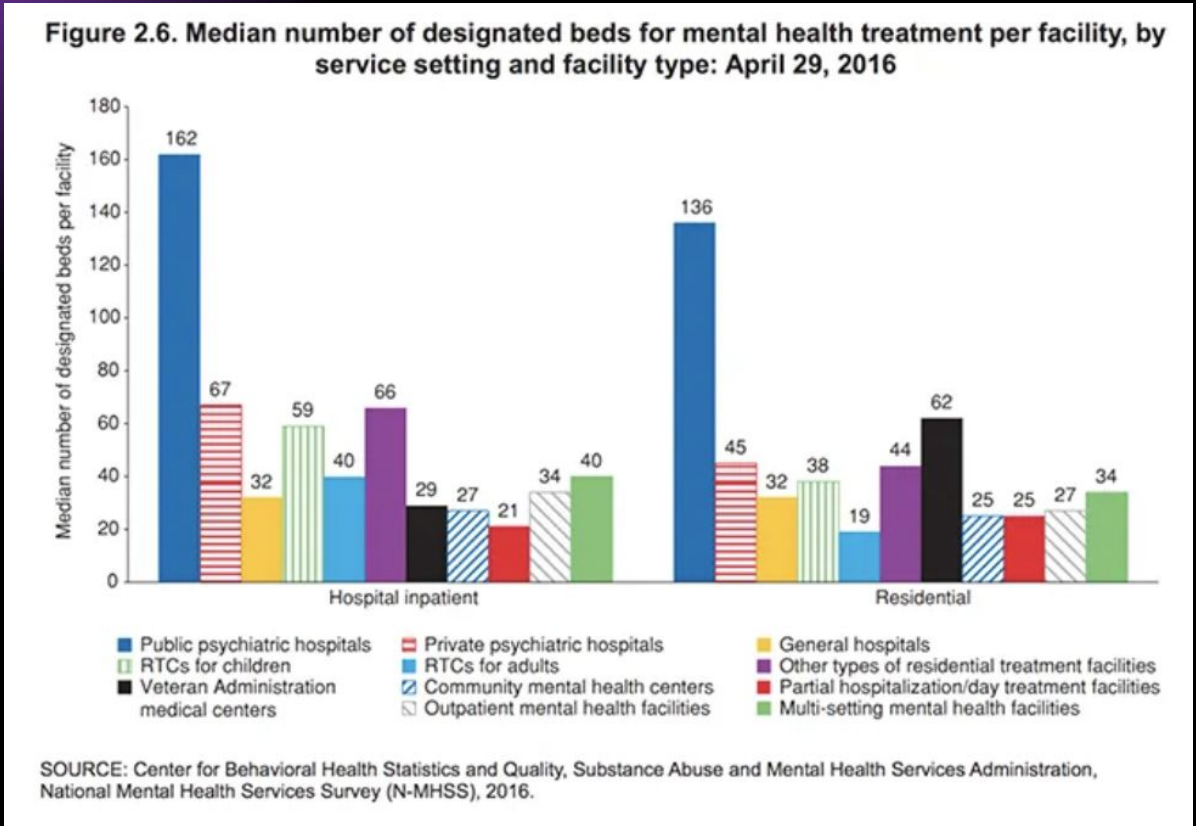
02 MATPLOTLIB

03 SEABORN

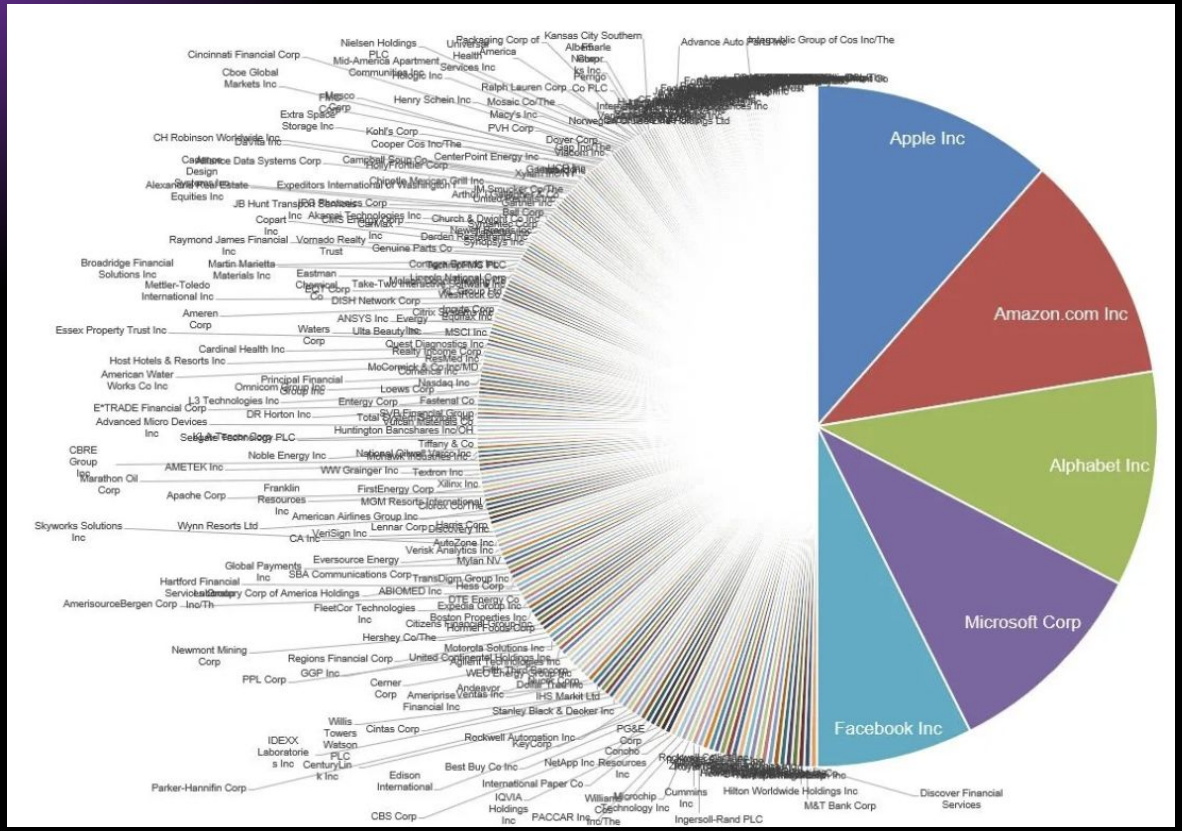
PLOTTING BEST PRACTICES

HAVE A CLEAR GOAL	What do you want to know/convey?
PICK THE RIGHT PLOT	Bar, scatter, histogram, boxplot
KEEP IT SIMPLE	Draw only what is needed to get the point across
LABEL EVERYTHING	Title, legend (if needed) and axes

BAD PLOT EXAMPLES



BAD PLOT EXAMPLES



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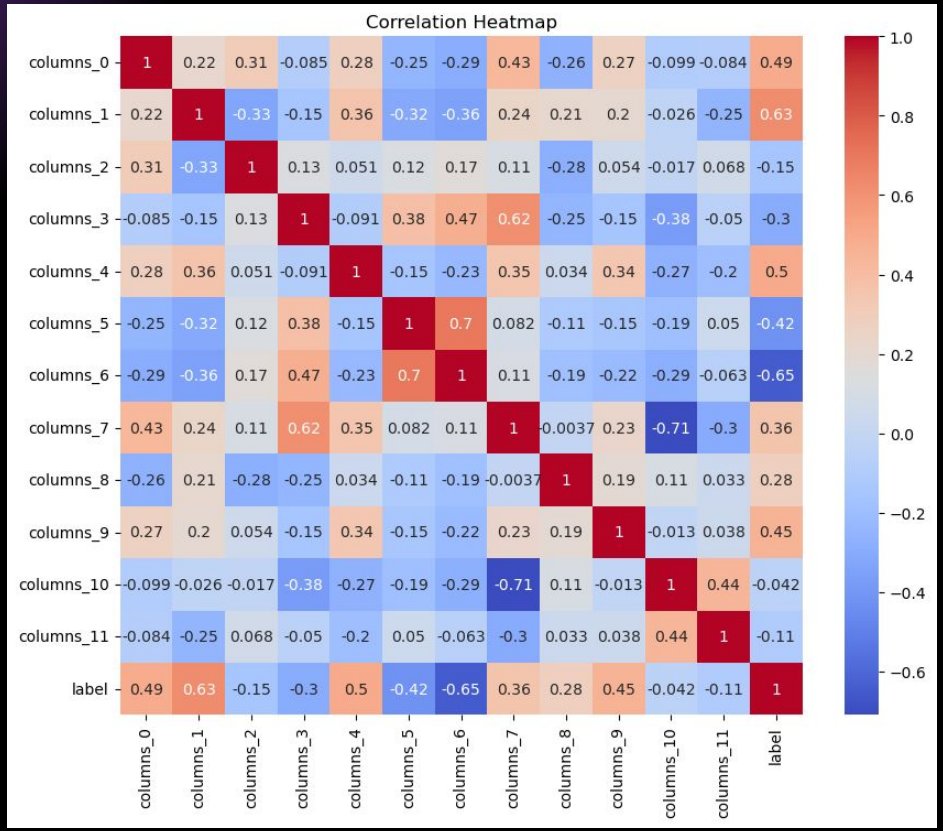


MATPLOTLIB

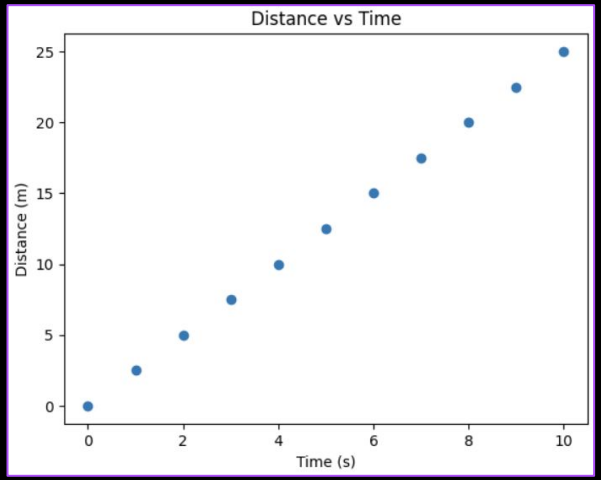
WHAT Plotting and data visualization library for Python with functions for many common plot types.

WHERE Documentation: matplotlib.org
GitHub: matplotlib/matplotlib
PyPI: matplotlib

```
import matplotlib.pyplot as plt

plt.scatter(times, distances)
plt.title('Distance vs Time')
plt.xlabel('Time (s)')
plt.ylabel('Distance (m)')
plt.show()
```

✓ 0.1s



MORE EXAMPLES Matplotlib plot gallery

SEABORN

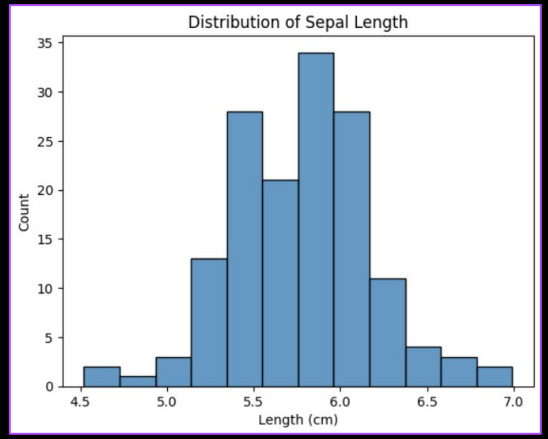
WHAT Statistical data visualization library based on Matplotlib. Easy to use interface for more complex plot types.

WHERE Documentation: seaborn.pydata.org
GitHub: mwaskom/seaborn
PyPI: seaborn

```
import seaborn as sns

sns.histplot(df_iris['sepal_length'])
plt.title('Distribution of Sepal Length')
plt.xlabel('Length (cm)')
plt.ylabel('Count')
plt.show()
```

✓ 0.1s



MORE EXAMPLES

Seaborn example gallery