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DSC 640: Data Presentation & Visualization - Winter 2023

WEEKS 7-8 Exercises: Scatterplots, Bubble Charts, & Density Plots/Maps (PYTHON)

Importing Libraries.

```
In [1]: import os
import pandas as pd
import numpy as np
import seaborn as sns
import matplotlib.pyplot as plt
import plotly.express as px

import warnings
warnings.filterwarnings('ignore')

# nltk.download('example')
# pip install squarify

In [2]: crime_df = pd.read_csv('/Users/aaronbrown/Documents/Classwork/DSC 640 - Data Presentation and Visualization/Data/crimerates-by-state-2005.csv')

In [3]: crime_data = crime_df
crime_data.head(3)

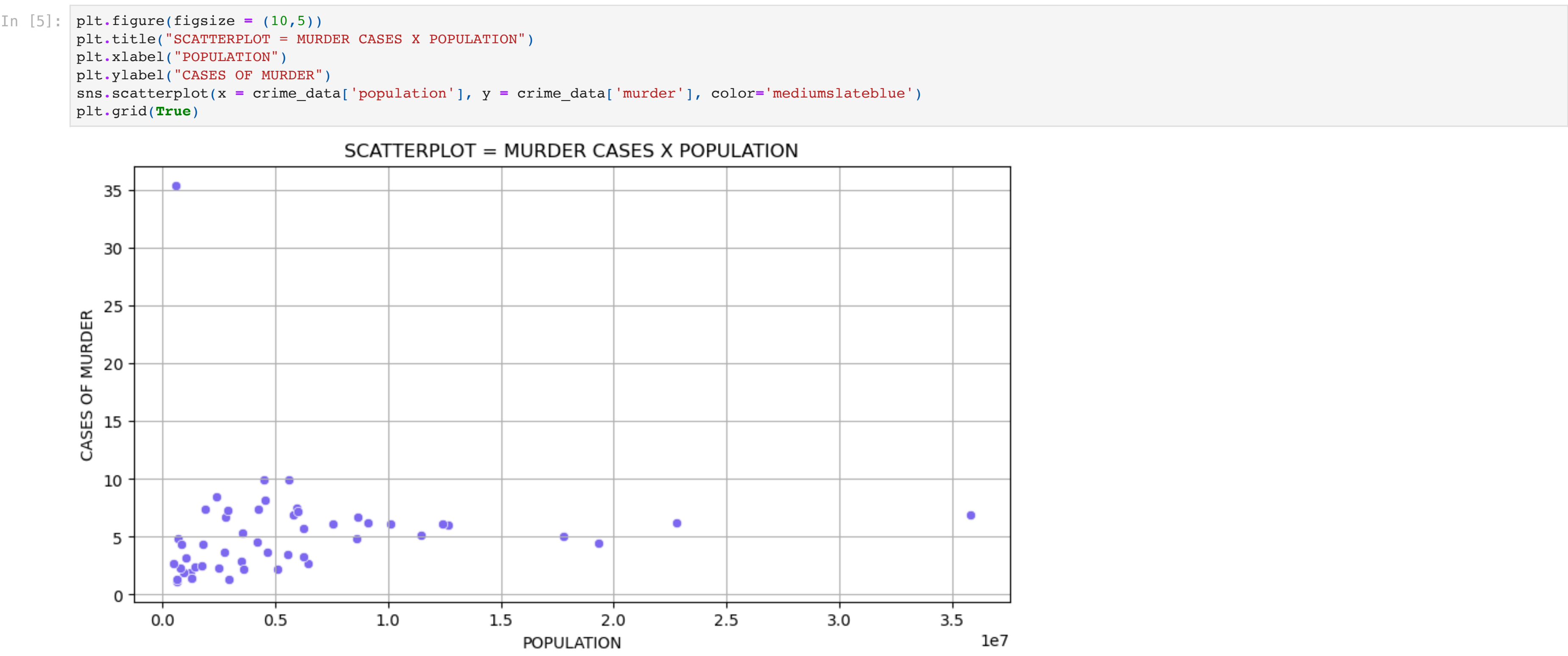
Out[3]:
```

	state	murder	forcible_rape	robbery	aggravated_assault	burglary	larceny_theft	motor_vehicle_theft	population
0	United States	5.6	31.7	140.7	291.1	726.7	2286.3	416.7	295753151
1	Alabama	8.2	34.3	141.4	247.8	953.8	2650.0	288.3	4545049
2	Alaska	4.8	81.1	80.9	465.1	622.5	2599.1	391.0	669488

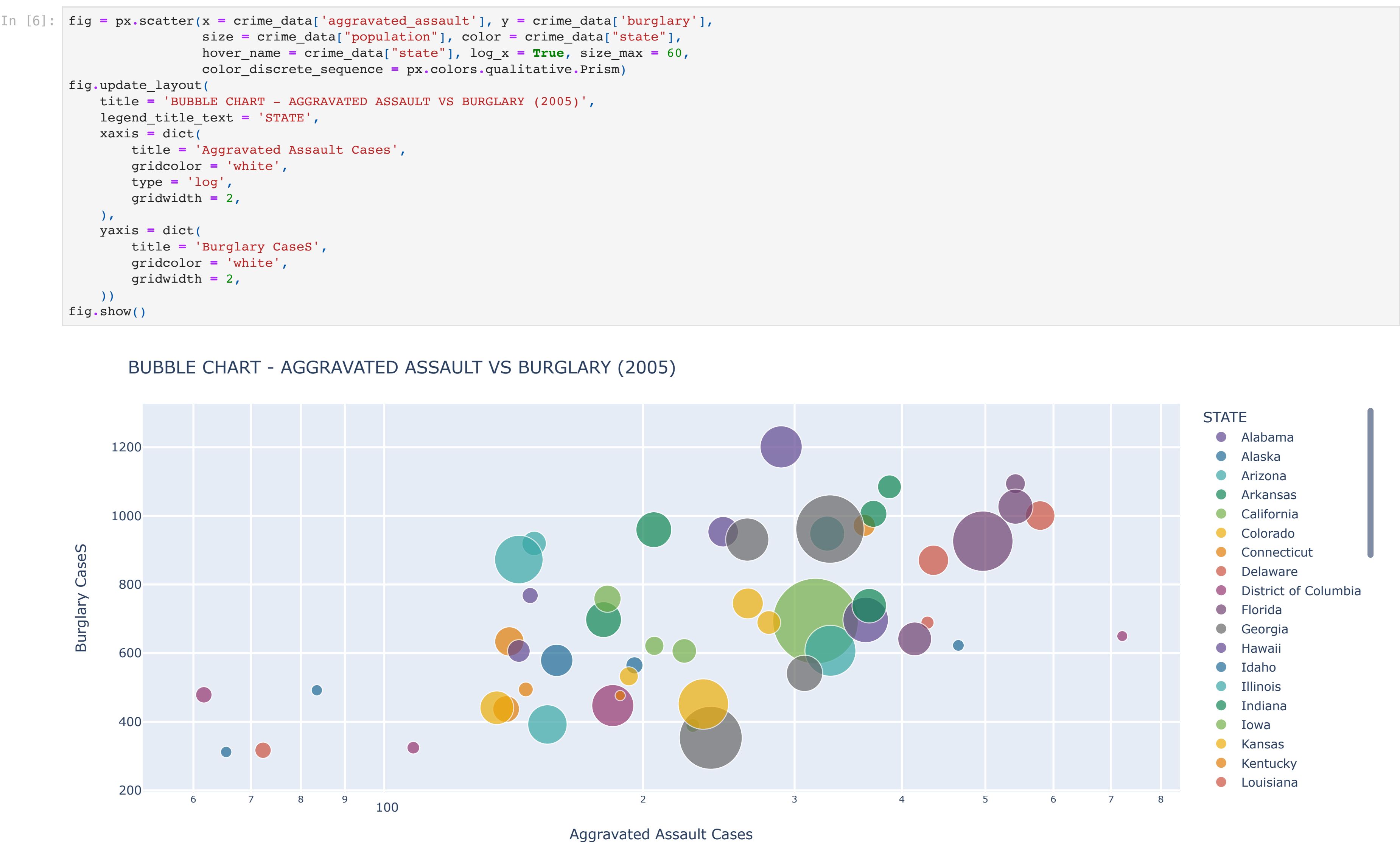
```
In [4]: crime_data = crime_data.drop([0])
```

Produce: 1 Scatterplot, 1 Bubble Chart and 1 Density Plot Chart Using Python.

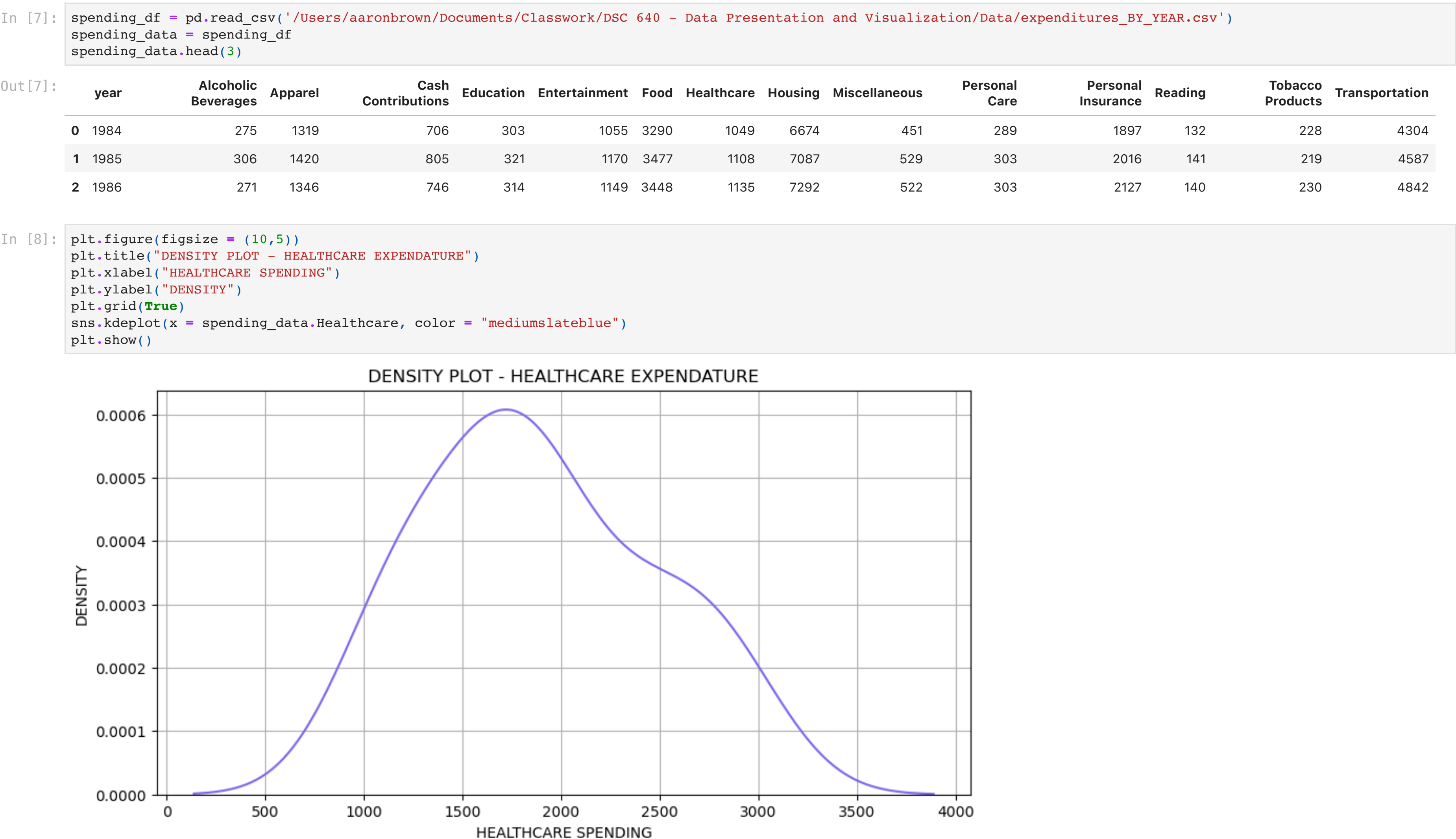
Generating Scatterplot.



Generating Bubble Chart.



Generating Density Chart.



References

Choosing Colormaps in Matplotlib:

<https://matplotlib.org/stable/tutorials/colors/colormaps.html>

List of named colors in matplotlib:

https://matplotlib.org/stable/gallery/color/named_colors.html

Seaborn Styling, Color:

<https://www.codecademy.com/article/seaborn-design-iaa>

Plotly legend title:

<https://stackoverflow.com/questions/45555266/plotly-legend-title>

Bubble Charts in Python:

<https://plotly.com/python/bubble-charts/>

Built-in Continuous Color Scales in Python.

<https://plotly.com/python/builtin-colorscales/>

Plotly: How to change the colorscheme of a plotly express scatterplot?:

<https://stackoverflow.com/questions/60962274/plotly-how-to-change-the-colorscheme-of-a-plotly-express-scatterplot>