

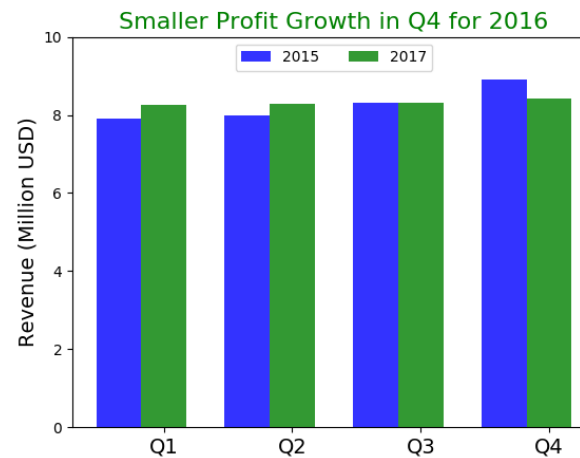
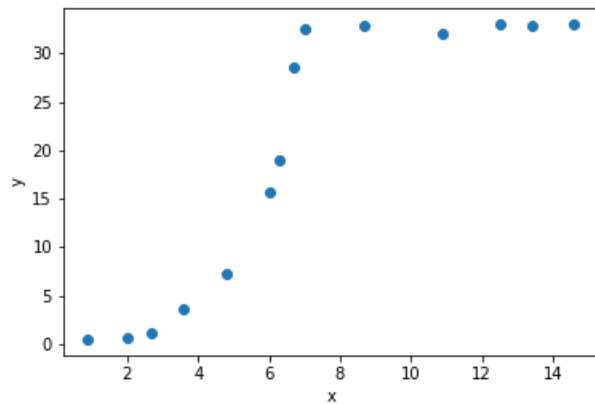
# matplotlib

Dr. Ilkay Altintas

- Explain the role of Matplotlib in python

# What is matplotlib

- Plotting Library for Python



## Why matplotlib

"Matplotlib tries to make easy things easy and hard things possible."

<https://matplotlib.org/>

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## Other libraries?

- Seaborn
- ggplot
- Altair
- Bokeh
- Plotly
- Folium

# Visualization: World Development Indicators

- Use the World Development Indicators Dataset for data science

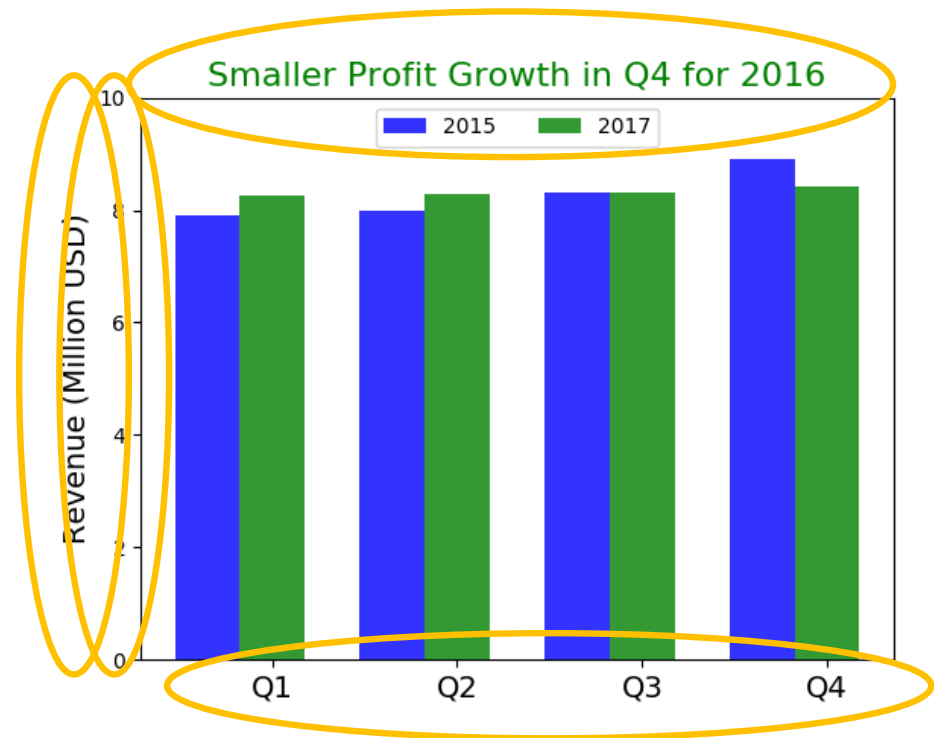
# Visualization: Basic Plotting in Matplotlib Part 1

- Create bar charts, line charts, and histograms using matplotlib
- Recognize the common components in a matplotlib figure
- Create line charts and scatterplots using matplotlib



# Common Components

- Chart type (bar, line, hist)
- Axes data ranges
- Axes labels
- Figure labels
- Legend
- Aesthetics
- Annotations.

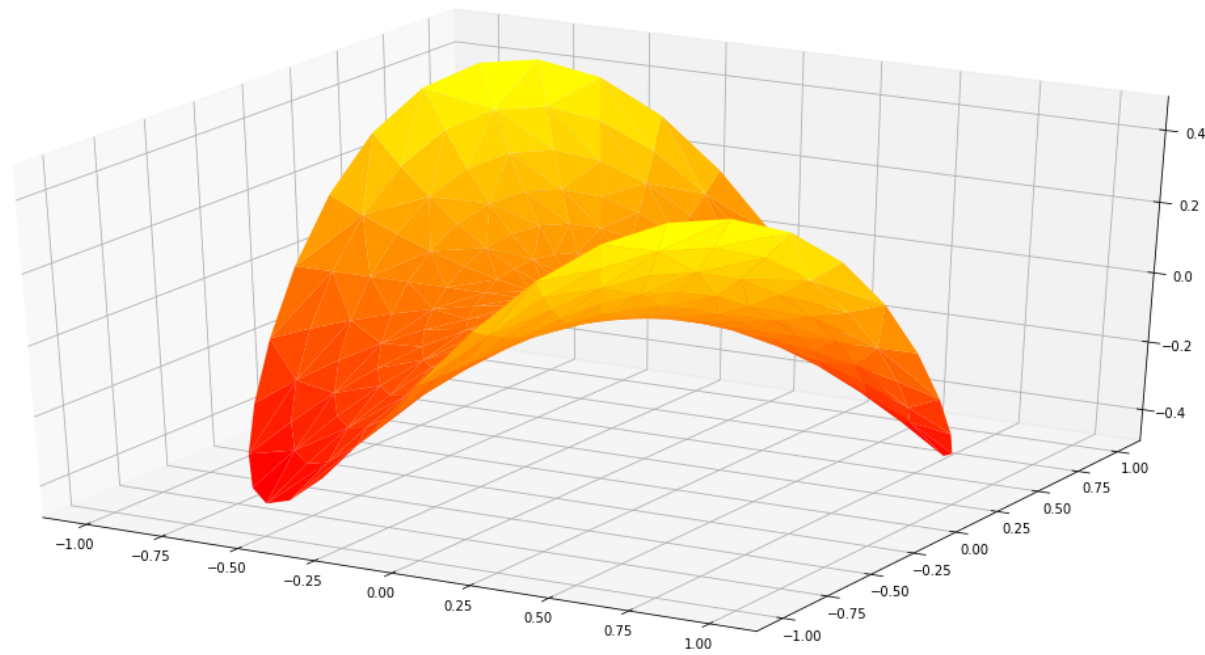


# Visualization: Basic Plotting in Matplotlib Part 2

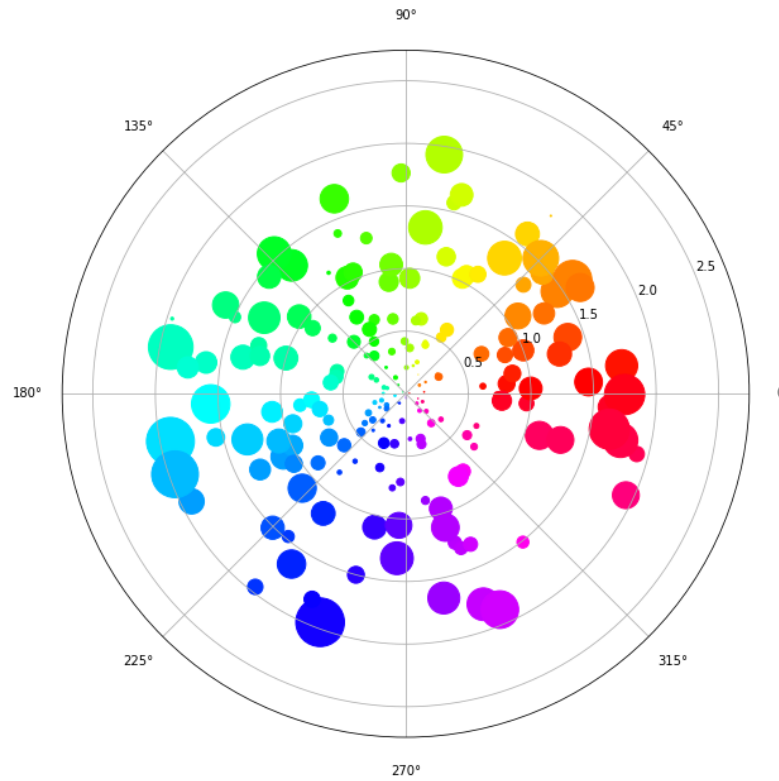
- Create line charts and scatterplots using matplotlib

# Visualization: Matplotlib Additional Examples

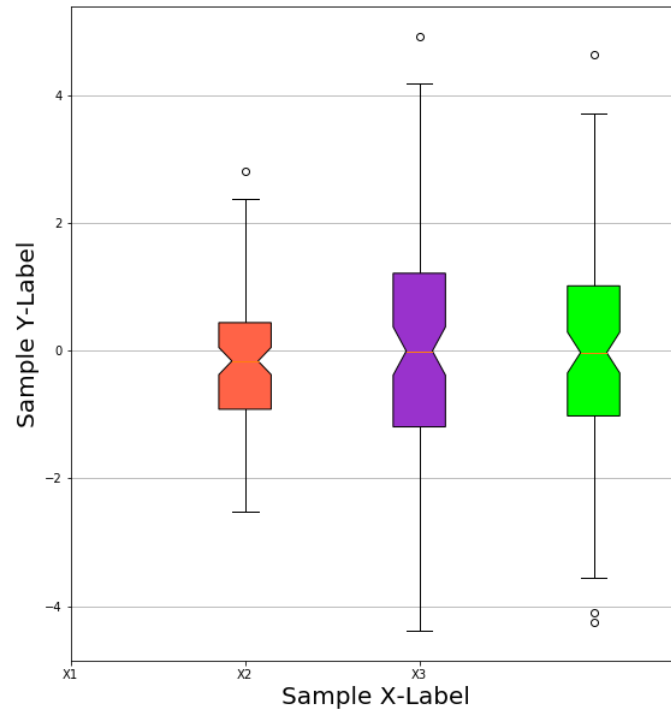
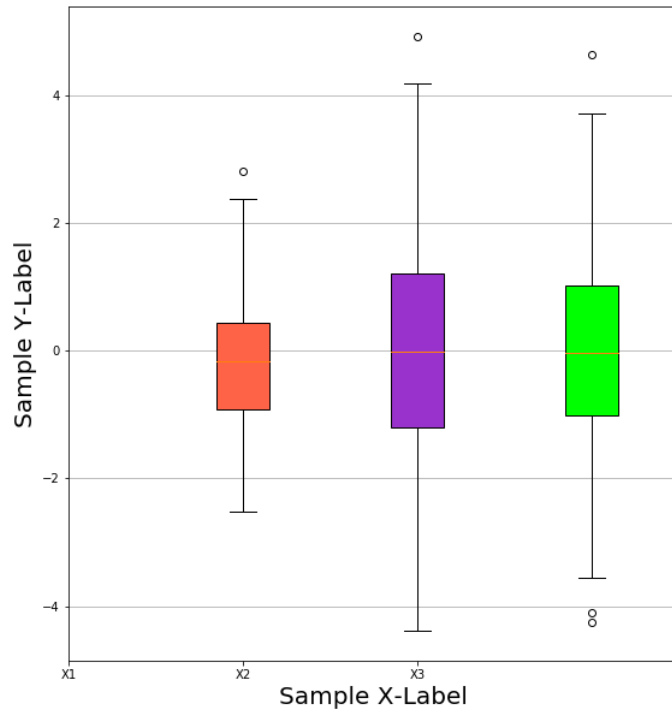
# Additional Examples:



# Additional Examples:



# Additional Examples:



# Visualization: Folium Example

- Use the Folium library to create geographic overlays