

## Assignment

1. The American Community Survey, part of the US Census, asks Americans how many vehicles their household has access to. The results are shown in the table below. Create a bar graph.

Number of Vehicles Available	Millions of Households
0	10.6
1	39.8
2	45.3
3	18.1
4	6.3
5+	2.7

2. Create a pie chart using the same data of number of vehicles per household in the US (2019). (Hint: You have to create a relative frequency table first)

### 3. Visualizing your data

- Objective: To understand the concepts and techniques of data visualization, including selecting the appropriate chart type for a given scenario, designing effective visualizations, and interpreting visualizations.

#### PART 1: Chart Selection

- a. Choose a data set of your choice (or you can use a sample data set).
- b. Write a short paragraph explaining the type of data contained in the data set (e.g. categorical, continuous, etc.).
- c. Using the data set, create three visualizations using different chart types (e.g. bar chart, line chart, scatter plot, etc.).
- d. For each visualization, write a short paragraph explaining the appropriate use of the chart type and why it was chosen for the data set.

#### PART 2: Designing Effective Visualizations

- a. Choose one of the visualizations created in part 1.
- b. Refine the visualization to make it more effective (e.g. adding labels, changing colors, etc.).
- c. Write a short paragraph explaining the changes made to the visualization and why they were necessary.

#### PART 3: Interpreting Visualizations

- a. Choose one of the visualizations created in part 1.
- b. Write a short paragraph explaining what the visualization tells us about the data set.
- c. Provide insights and observations from the visualization that may not be immediately obvious.