Nora Casey

INFO 474 Final Project

Average Precipitation in Seattle per Month and per Day

User Tasks

- Allows for users to view average annual precipitation per month in Seattle, WA.
- Allows users to view the individual average precipitation for a given month
- Allows for users to view which month has the highest amount of average precipitation
- Allows for users to view which month has the lowest amount of average precipitation
- Allows users to select a month to learn more about daily precipitation averages
- Users can compare which days of a month have the highest recorded precipitation average
- Users can compare which days of the month have the lowest recorded precipitation average
- Users can view how precipitation varies per month
- Users can view how precipitation varies per day in each month

Design Description

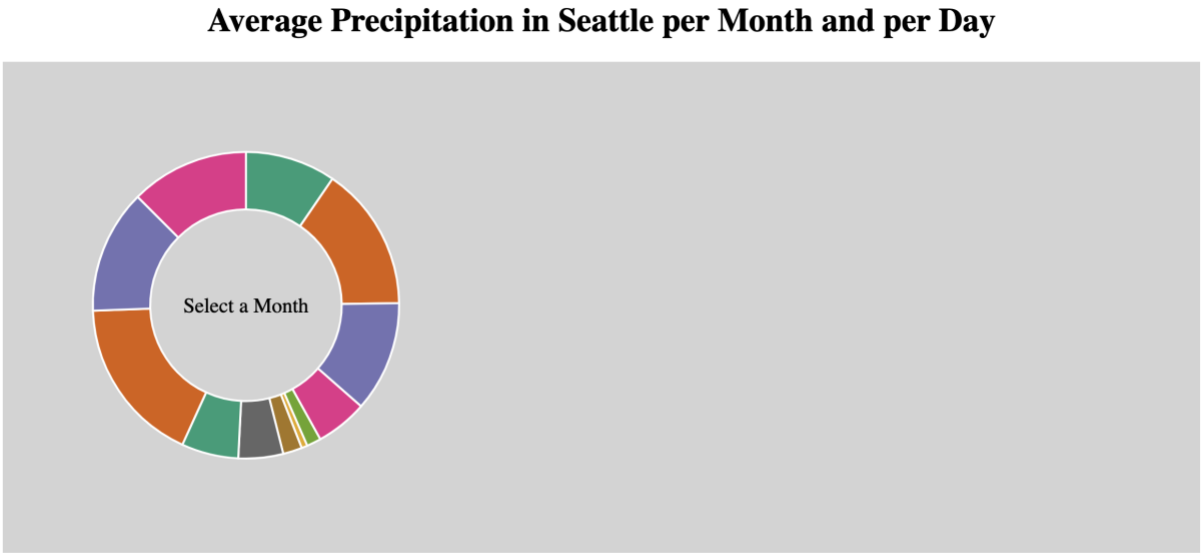
The design of this visualization allows users to both view annual precipitation averages per month and precipitation averages per day in a selected month. In order to view averages per day in a given month, the visualization first requires users to select a month. To view the month or day and corresponding precipitation average, users are required to hover over sections of the donut diagram. This will cause the month name and average precipitation for that month to appear below the diagram.

Once a month has been selected, clicking on the corresponding portion of the donut diagram will cause an additional diagram to render. This diagram is labelled with the name of the selected month and contains the average precipitation recorded per day in the selected month. It is important to note that in order to view the average precipitation amount for different portions of the diagram, this visualization requires users to hover or click on the diagram. This feature emphasizes interaction with the visualization but can also hinder viewing overall and big picture data comparisons.

Data manipulation in this visualization includes grouping objects by month and then by day within a given month. This new array of objects calculates the average precipitation per month and per day of each month; by adding all actual_precipitation values and dividing them by the length of the array for months and the number of days within a month array object.

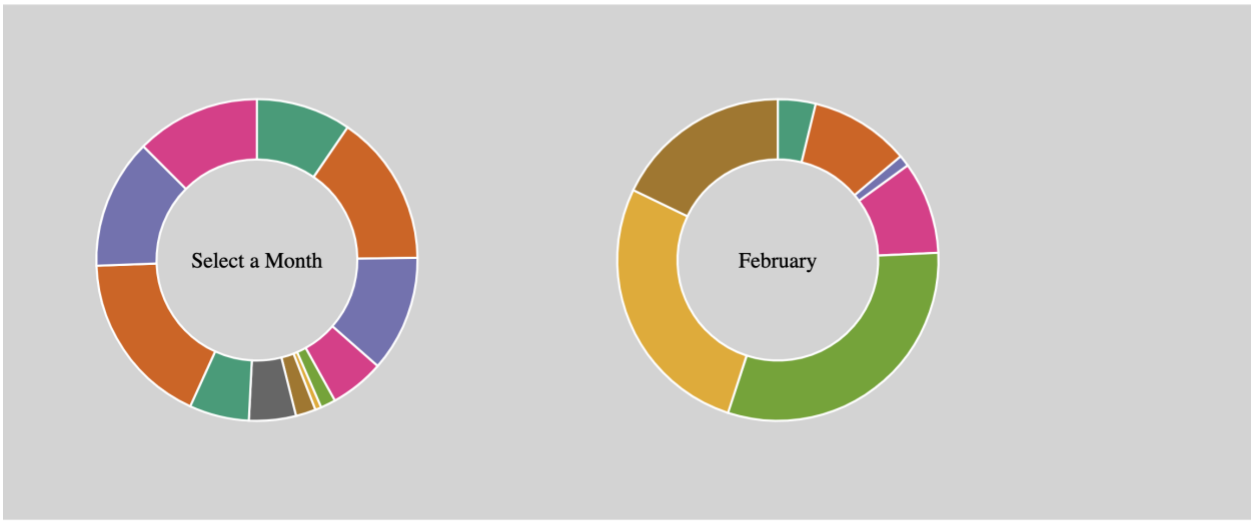
Images below depict the Visualization Before and After interaction with the diagram:

Before selecting a portion of the donut diagram:



February
Average Precipitation: 0.188 inches

After selection:



Saturday
Average Precipitation: 0.235 inches