DATA Analysis And Visualization Fall 2022

Semester Project



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Project Statement:

In this project, we have to develop a graph and map visualization solution consisting of a dashboard (containing multiple visualizations). And it is a necessity to create four distinct visualizations from the dataset provided (Birdstrikes.csv).. The visualizations are as follows:

- 1. Map visualization
- 2. Timeline visualization
- 3. Graph Visualization
- 4. Hierarchy Visualization

1. Map Visualization:

This Visualization is to represent airports. What we need to do is create a map representing all the airports of different origin states.

Visualization Snapshot:



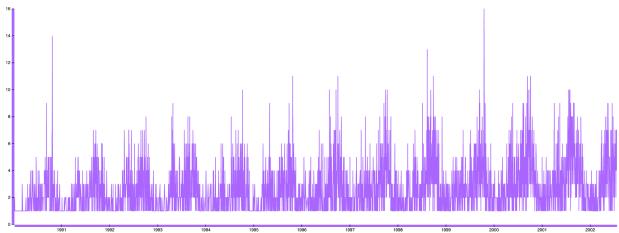
Symbols/ Colors used: Red circles with dynamic radius according to the number of bird strikes to represent the airports and purple for maps with white borders to represent states.

Zooming/Panning: Available

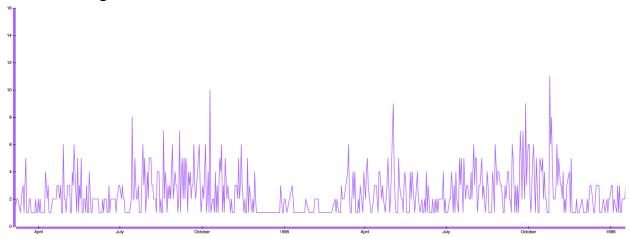
2. Timeline visualization:

This visualization is to represent the date of the bird strikes against our dataset. This visualization will also act as a visual filter for the user to select a specific timeline.

Visualization Snapshots:



After Brushing:



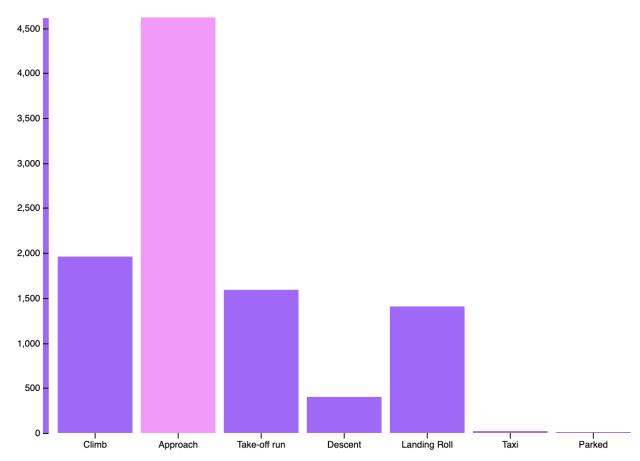
Brushing/Linking: Available

3. **Graph Visualization:**

This visualization will work coherent with the specific timeline the user choses in timeline visualization. It will form a graph representing all the remaining features of the dataset and to show how much impact each factor has(bird strikes, affected airports etc) .

Graph Visualization chosen: Bar Graph

Visualization Snapshots:



Zooming/Panning: Available

4. Hierarchy Visualization:

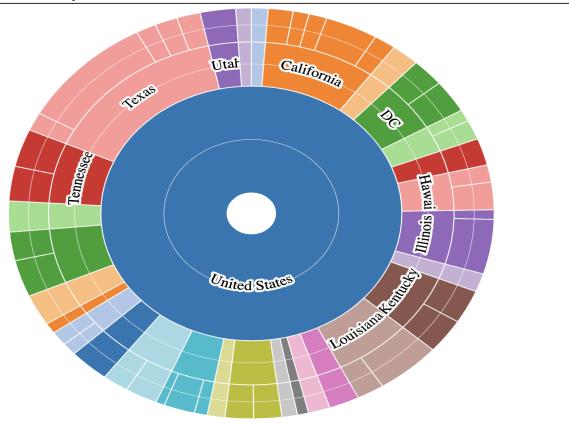
Requirement: To represent requirement is

to visualize the total number of bird strikes on the different airports of each origin state

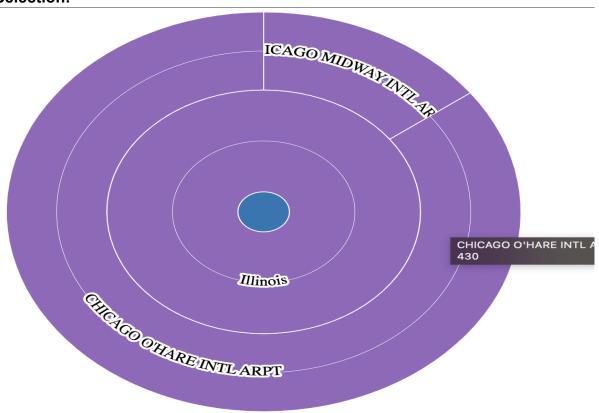
Hierarchy Requirement: The Parent node will be the state of the children nodes will be the airports and the number of bird strike occurrences.

We chose the following hierarchy: Sunburst

Visualization Snapshots:



With Selection:



Zooming/Panning:

Selection: Available

Brushing/Linking: Available without linking

D3 version: v4 and v7