HydroHomies DV Project Report

Kishan Sairam Adapa (2018101026), M Kalyan Adithya (2018101106)

US Accidents –2019 Visualization

Demo Video
https://youtu.be/dxjI5qZDlHc

Slides
https://iiitaphyd-my.sharepoint.com/:p:/g/personal/kishan_sairam_students_iiit_ac_in/Edbs4U1vHcJAkjKeiffNPKQBJKC8TuIR01P1jQVdWSz4pg?e=GONF8S

Dataset
- The dataset used is US-wide car accident dataset, which covers 49 states of the United States.
- Original dataset from Kaggle. More about dataset can be learnt here.
- Cleaned file is cleaned.csv. Cleaning is done using following notebook.
- The accident data are collected from February 2016 to December 2019. Contains traffic data captured by a variety of entities, such as the US and state departments of transportation, law enforcement agencies, traffic cameras, and traffic sensors within the road-networks.

Purpose
- To create a visualization that can primarily be used as a tool by traffic officials to observe patterns and accident concentrations in USA.
- To help in identifying states that have managed to curb accidents compared to other states and the seriousness levels of commuters in these states with respect to road safety.
- To provide detailed analysis, state-wise and nation-wise, on how accidents vary with time of the day, day of the week, month of the year and weather during accidents in order to help officials as well as commuters be cautious during any unfavorable conditions

Analysis from demo
- We were able to draw many conclusions which will perhaps be useful for commuters and traffic officials alike. Some of them are:
- From the bar chart, 7-9AM seems to be the hours for maximum accidents and 4-6PM stands next. Perhaps due to people commuting for daily jobs. Law officials perhaps could be more vigilant in these hours.
- It is interesting to observe that in USA for 2019 most accidents happened when weather was clear, clearing out a misconception that might arise in some that most accidents occur in foggy/rainy weather. Most accidents in 2019 occurred in a Fair weather and perhaps drivers' errors might be leading cause of accidents and not weather.

- An observation from the line charts is how accidents increased towards the year 2019 which can be interpreted as drivers being more careless during the holiday season.