Washington D.C. Traffic Accident Dashboard

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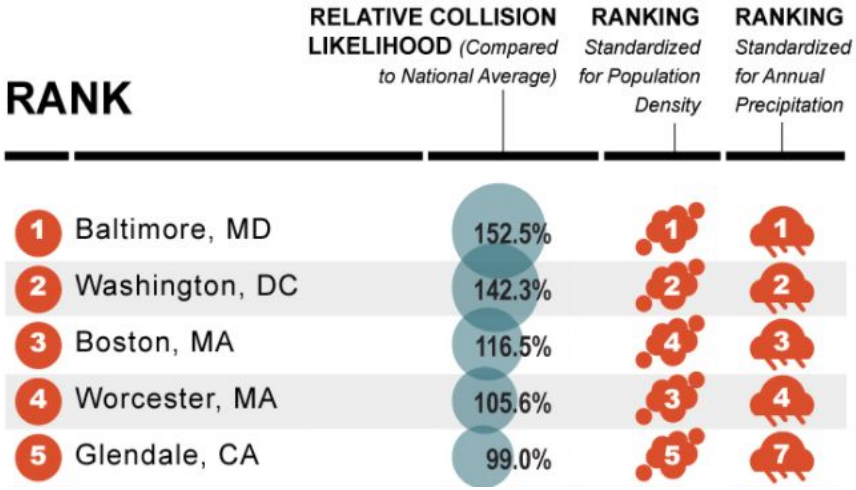
Background Information

- Washington DC is a major metropolitan area
- The Regional Transportation Planning Board reported that nearly two-thirds of commuters in D.C. drives alone[1].
- Compared to the average American commute time of 27 minutes, DC commuters spend an average of 43 minutes getting to and from work[2].



Based on 2019 Allstate America's Best Driver Report[3]

Project Proposal

- Develop a dashboard that will displays pertinent DC traffic accident information based on machine learning algorithms that will show likelihood of a car crash occurring based on criteria input by the user
- Purpose: Provide a useful tool for the workforce to help make informed decisions regarding their commute to DC

Datasets

- DC Vehicle Collision Data from opendata.dc.gov
  - Crashes in DC
  - Crash Details Table
- Traffic Volume in DC from opendata.dc.gov
  - 2018 Traffic Volume - Traffic volume data goes back to 2010
- Weather Data from National Weather Service Forecast Office
  - Baltimore/Washington

Potential Methodologies

- Modeling
  - Supervised learning models such as random forest, regression, and XGBoost
- Dashboarding webapp tools
  - Plotly Dash or Streamlit