Big Data Project

Topic: Analysis of Risk Factors of ANT Drivers

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Problem Statement and Objectives

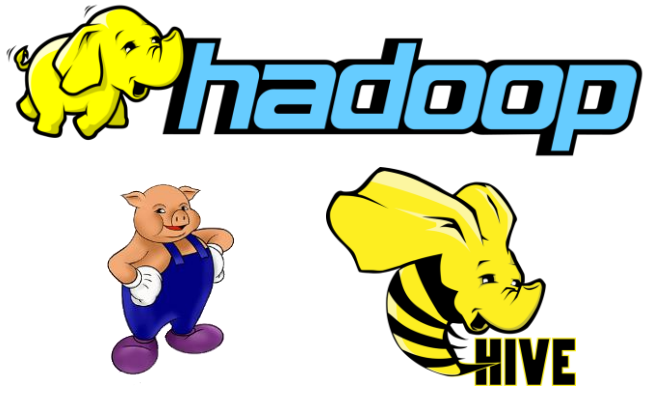
Traffic incidents involving trucks are a leading cause of death and injury. One such trucking company are resolved to minimize such damages by analysing their fleet data and implementing impactful measures.

Objectives:

1. Identify the risky drivers
2. Produce insights about the risk factors
3. Find the risky cities to drive
4. Find the risky truck models
5. Provide recommendations to mitigate any damages done
6. Provide the future scope of work

Workflow Diagram

1.Procure the data



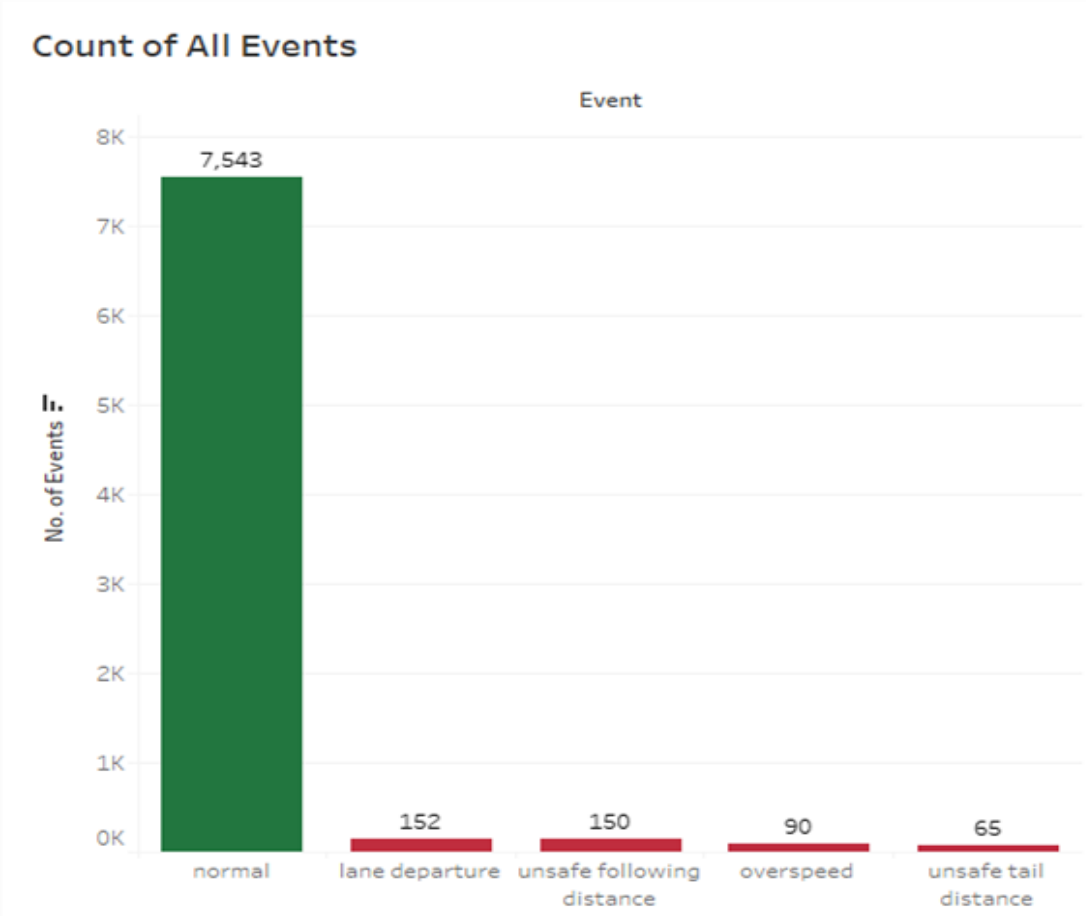
2. To handle the large amounts of data

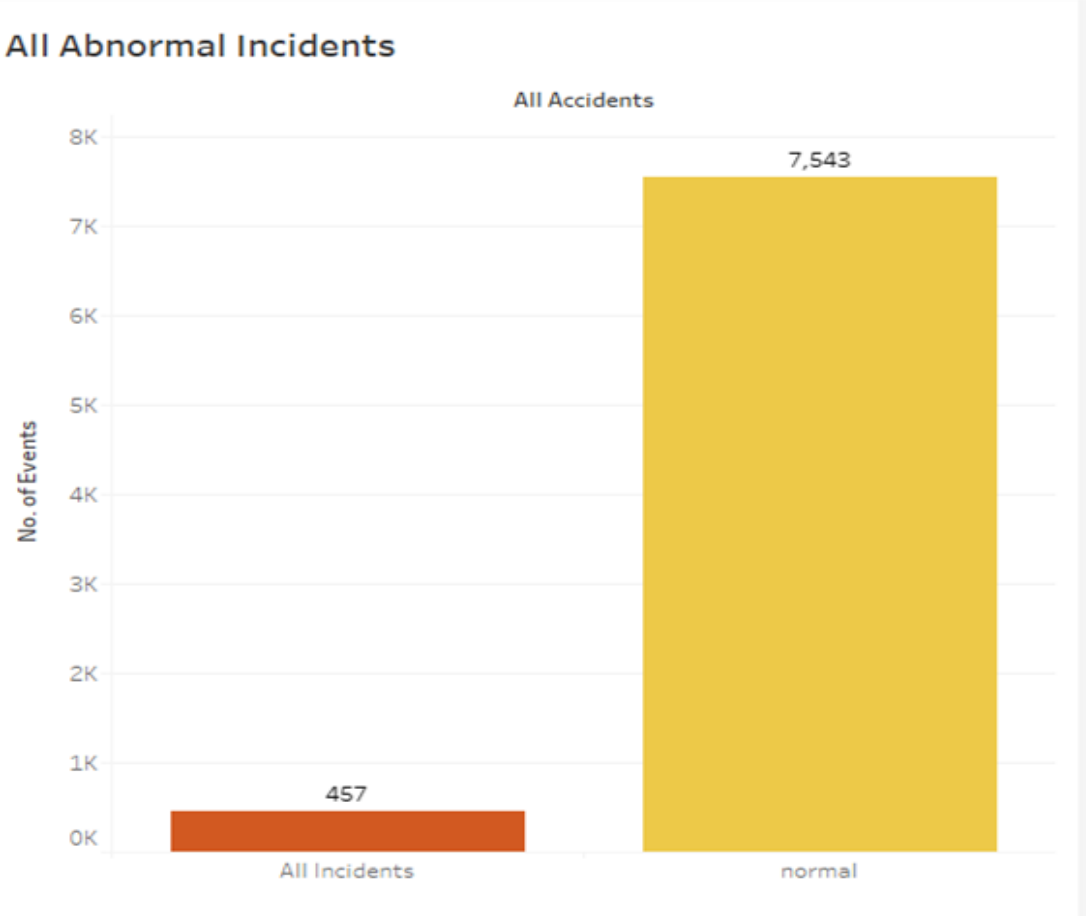
3.Provide fast integration when connecting to Tableau

4. Visualize the Data

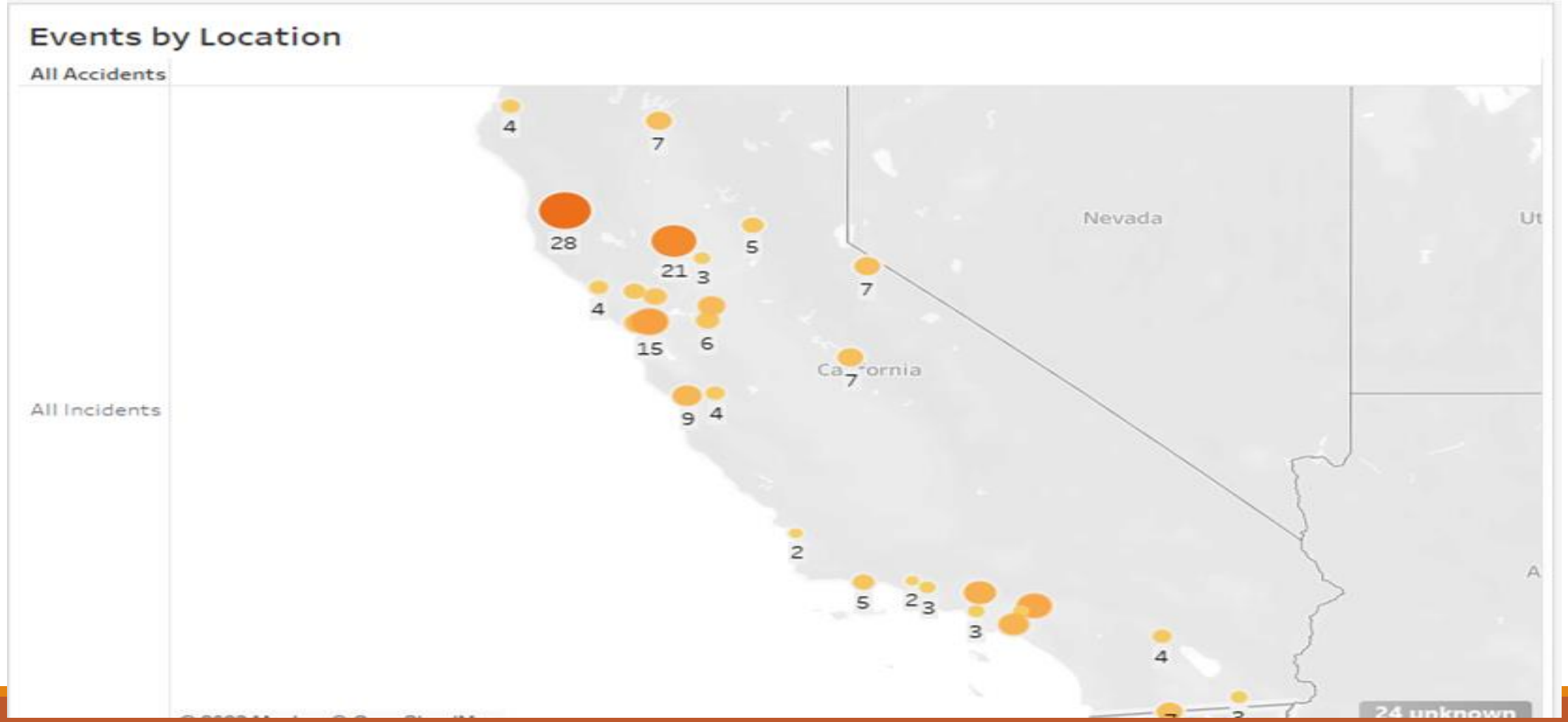
5. Insights and recommendations

Event Analysis

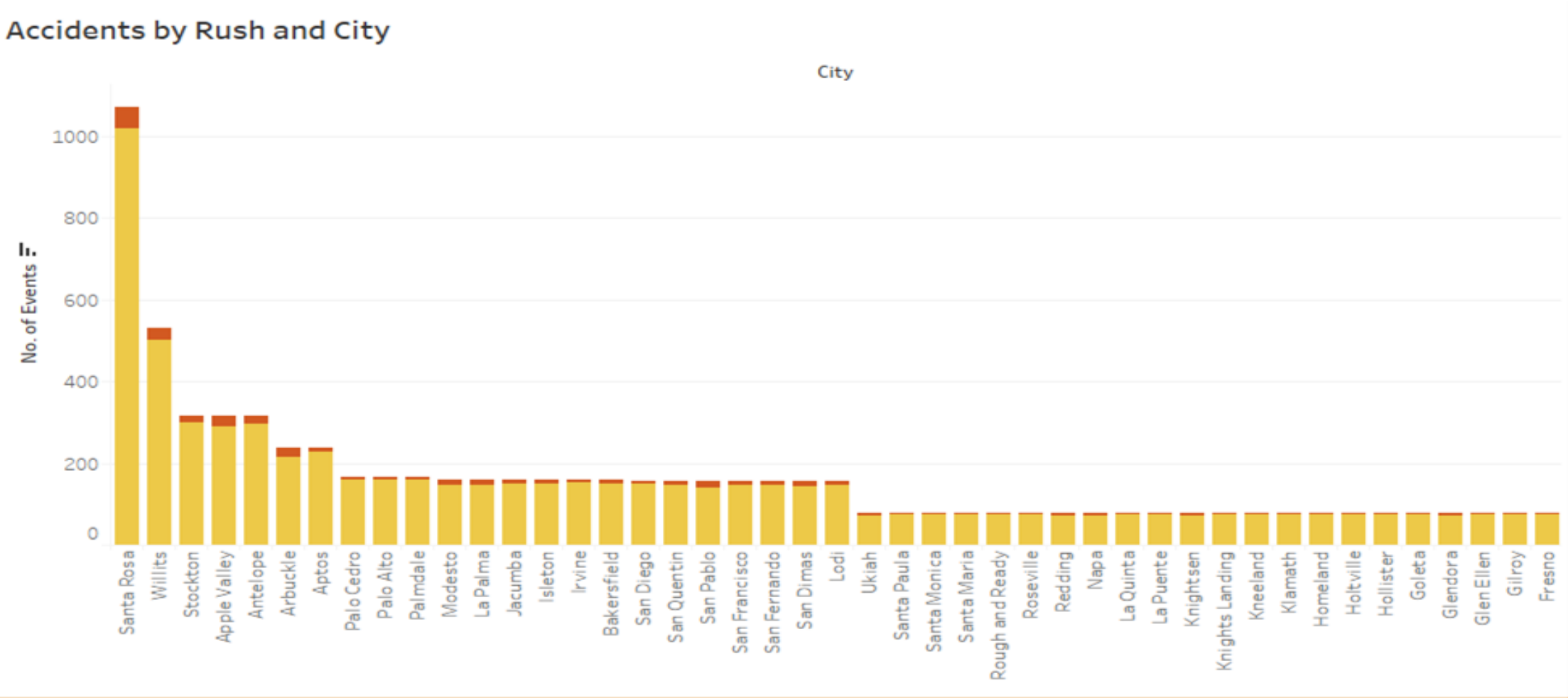




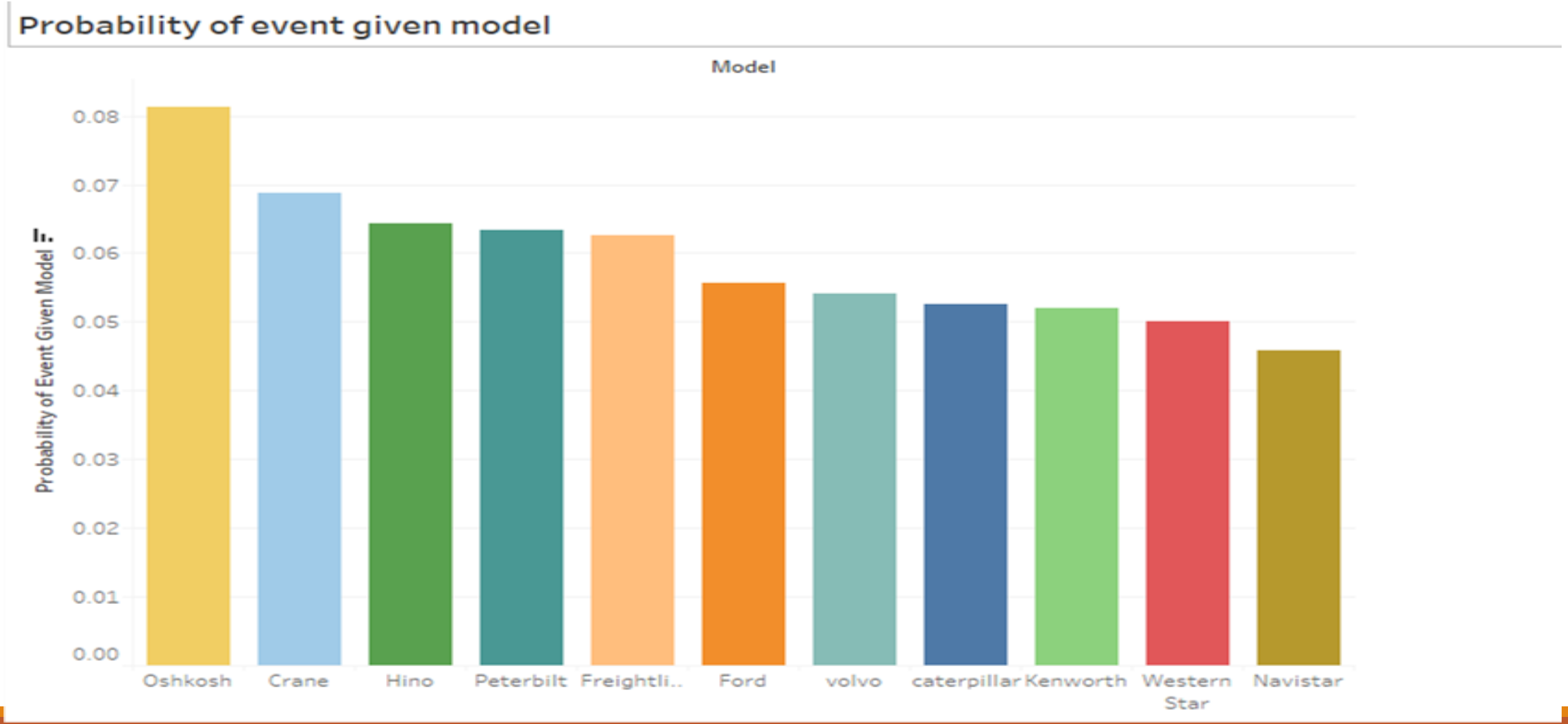
In which city more events are happening?



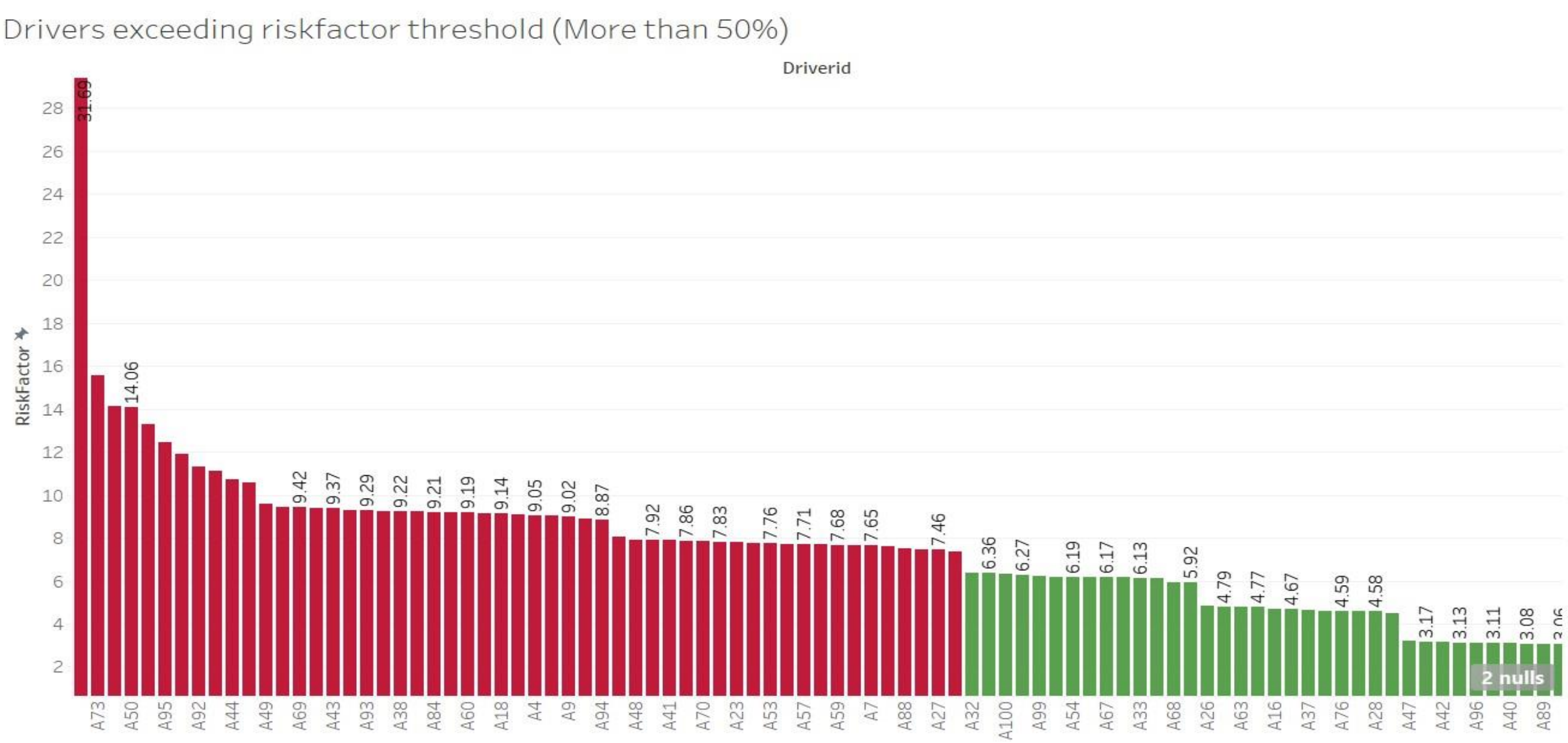
Which city is riskier to drive?



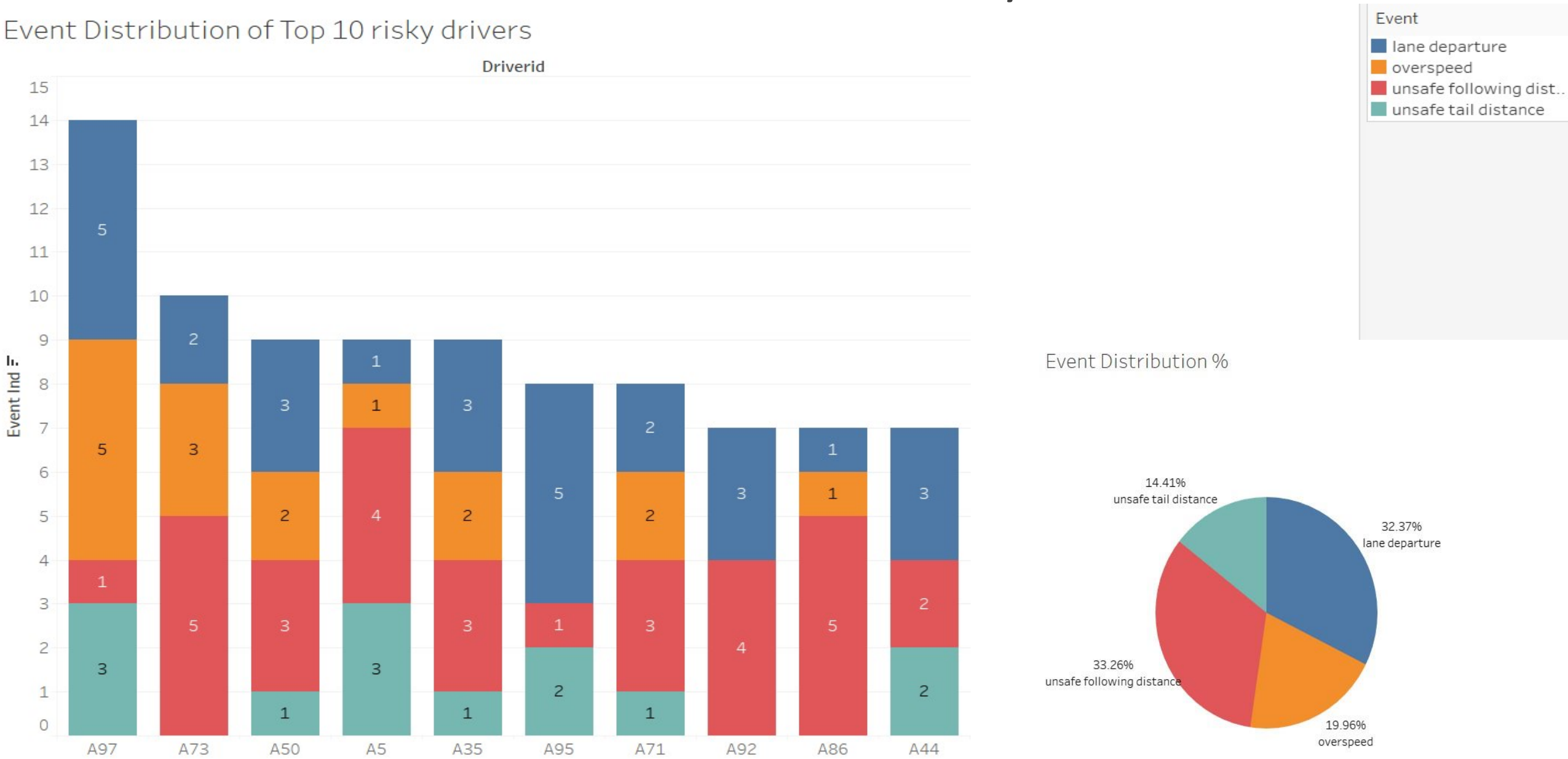
Which truck Models are riskier?



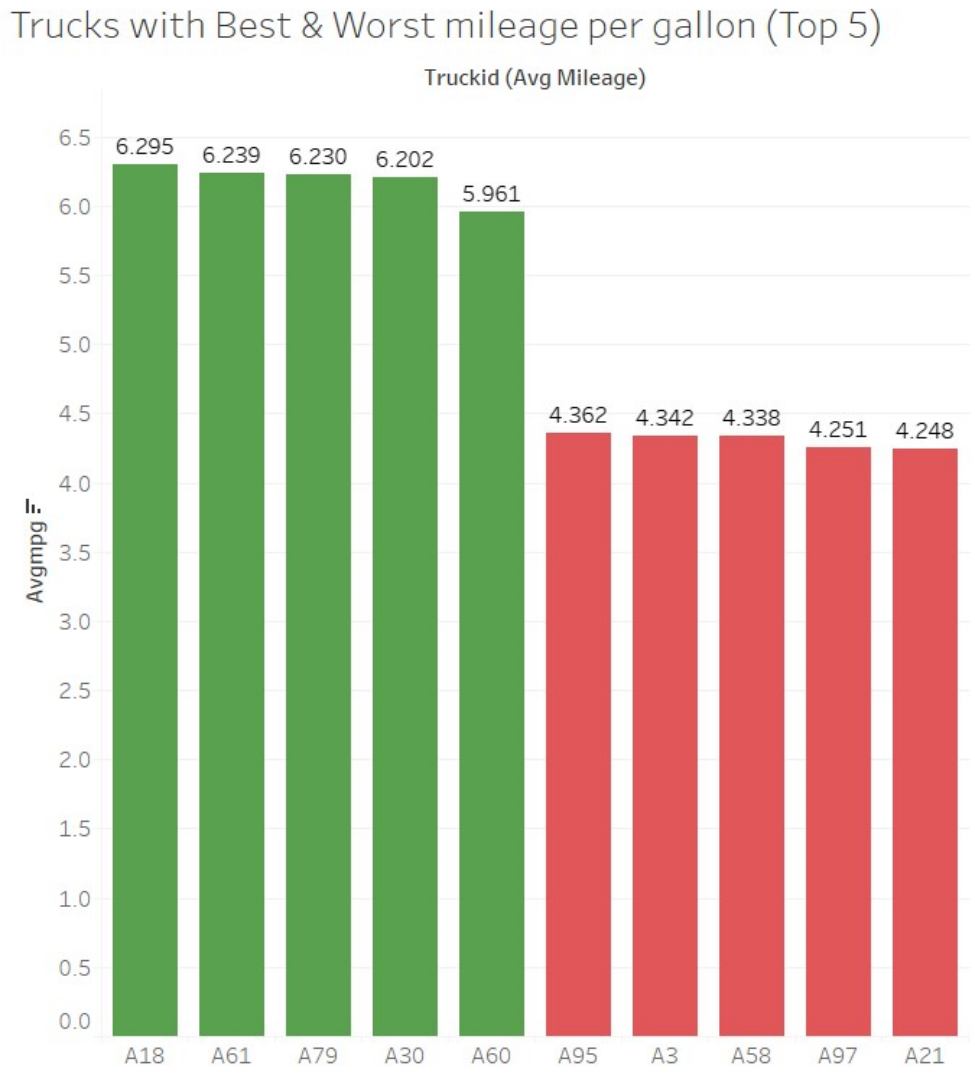
Who are the risky Drivers?

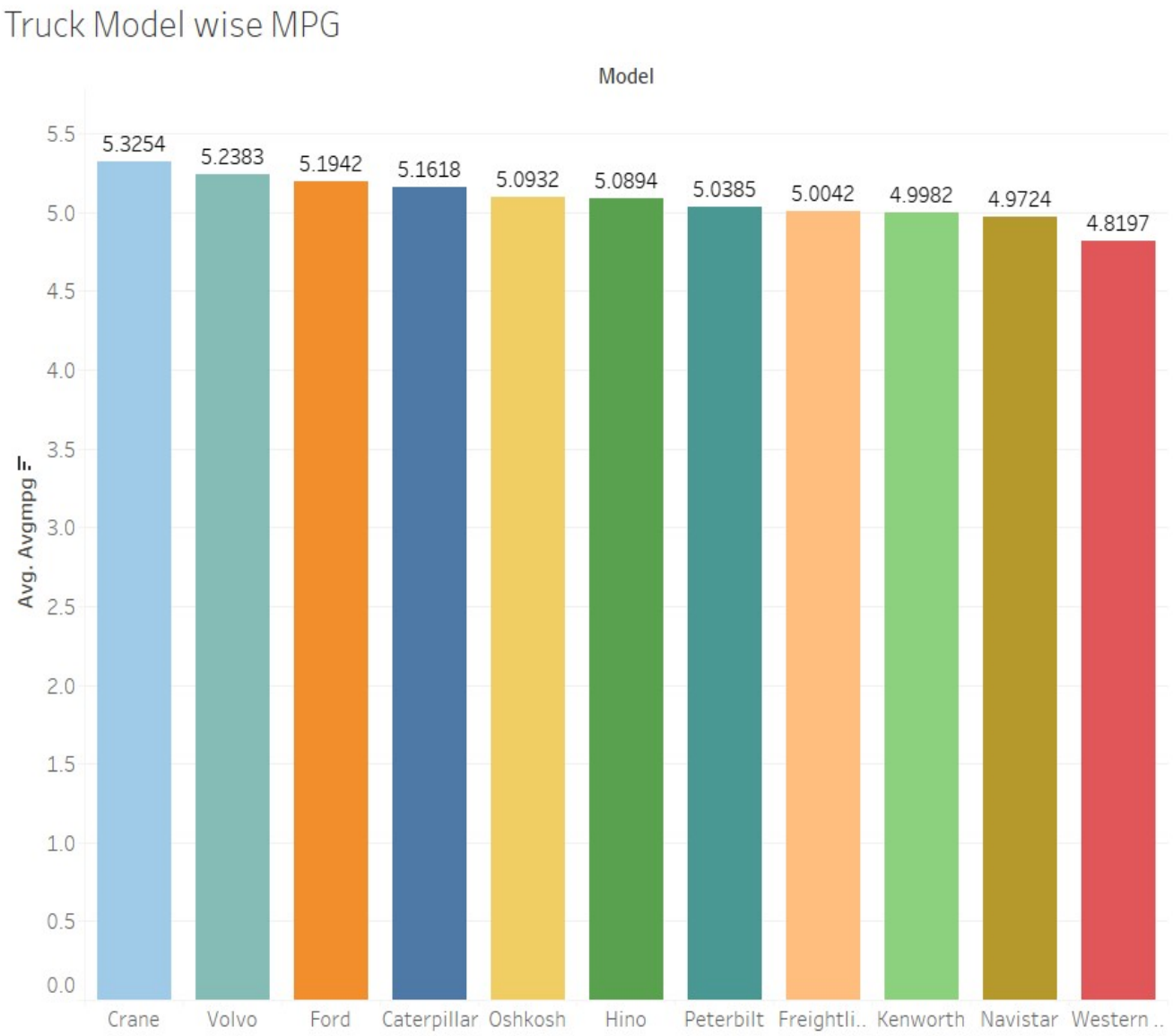


What kinds of events are they involved in?



Which drivers/trucks are providing the best mileage





Recommendations and suggestions

1. Training and feedback should be specific to each driver
2. Study the driving techniques of the best drivers and try to inculcate them in the other drivers
3. Unsafe following distance and lane departures are most of the traffic incidents, focus efforts on mitigating them
4. Thoroughly examine the Truck model Oshkosh as the probability of event for this model is significantly high.

Scope for future work

More data at various levels of granularity should be collected:

1. Data about the components of each truck should be collected. There is currently no idea if the drivers are making the difference or the state of the truck.
2. Data about the drivers; medical history, license info (issue date and location issued), experience and other factors that impact their driving ability/technique
3. Data about the routes taken, their terrain, the climate conditions in these routes will provide a better picture.
4. Data about the accidents, damages, and costs (can be procured from insurance details)