

GROUP 4

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CRASH REPORTING DATA



THE DATASET

Obtained from data.gov catalog

Reports details of all traffic collisions occurring on county and local roadways within Montgomery County in Maryland from 2015-2024.

Shows each collision data recorded and various other related data points including weather conditions, car makes, and other insights into the accident.

Before analyzing and visualizing the data, it had to be cleaned.

Manipulations included:

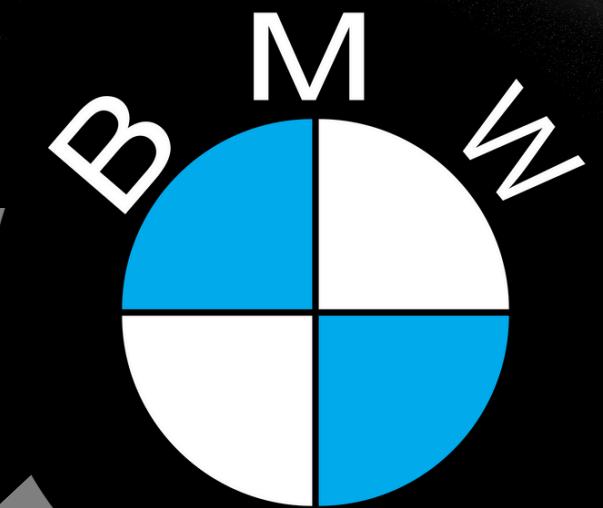
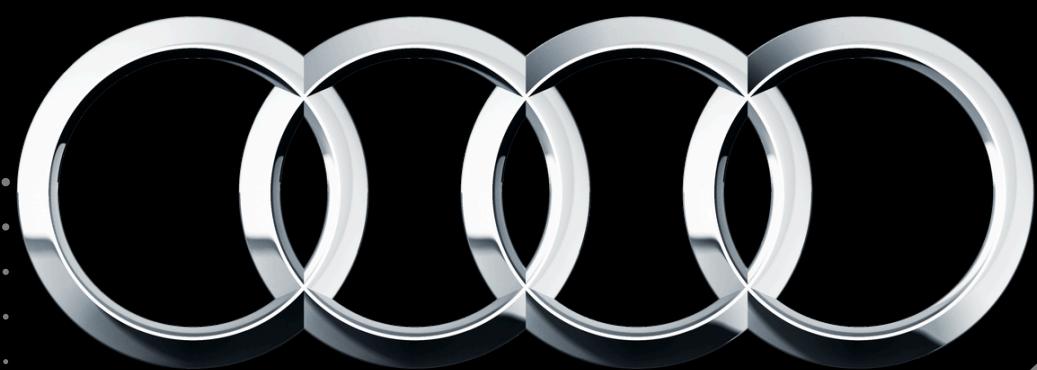
- Excluding and filtering out extraneous data and outliers (ex: Longitude, Latitude, and null values).
- Modifying the data and datatypes for spelling mistakes, uniformity, and standardization (ex: Vehicle Make misspelled).
- Aggregating data to calculate values to find percentages and proportions.

THE DATASET

A	B
1 Report Number	Number of the police report/collision report
2 Crash Date/Time	Date and time of the collision (MM/DD/YYYY Time)
3 Route Type	Type of the road the collision occurred on
4 Road Name	Name of the road the collision occurred on
5 Collision Type	Type of collision that occurred
6 Weather	Weather condition during collision
7 Surface Condition	Surface of road condition during collision
8 Light	Status of visibility/light
9 Traffic Control	Whether there were any traffic controls applicable
10 Driver Substance Abuse	Whether there was substances in the driver at the time of collision
11 Driver At Fault	Whether the driver was at fault
12 Injury Severity	Severity of the injury done to the driver
13 Vehicle Damage Extent	Severity of the injury done to the vehicle
14 Vehicle First Impact Location	Where the vehicle collision occurred on the vehicle
15 Vehicle Body Type	Type of vehicle (SUV, Truck, Sedan, etc.)
16 Vehicle Movement	The movement type at time of collision
17 Vehicle Going Direction	Cardinal direction that the vehicle was going
18 Speed Limit	Speed limit during the collision
19 Driverless Vehicle	Whether the vehicle was driverless
20 Parked Vehicle	Whether the vehicle was parked
21 Vehicle Year	Year of the vehicle
22 Vehicle Make	Make of the vehicle
23 Vehicle Model	Model of the vehicle

QUESTION 1

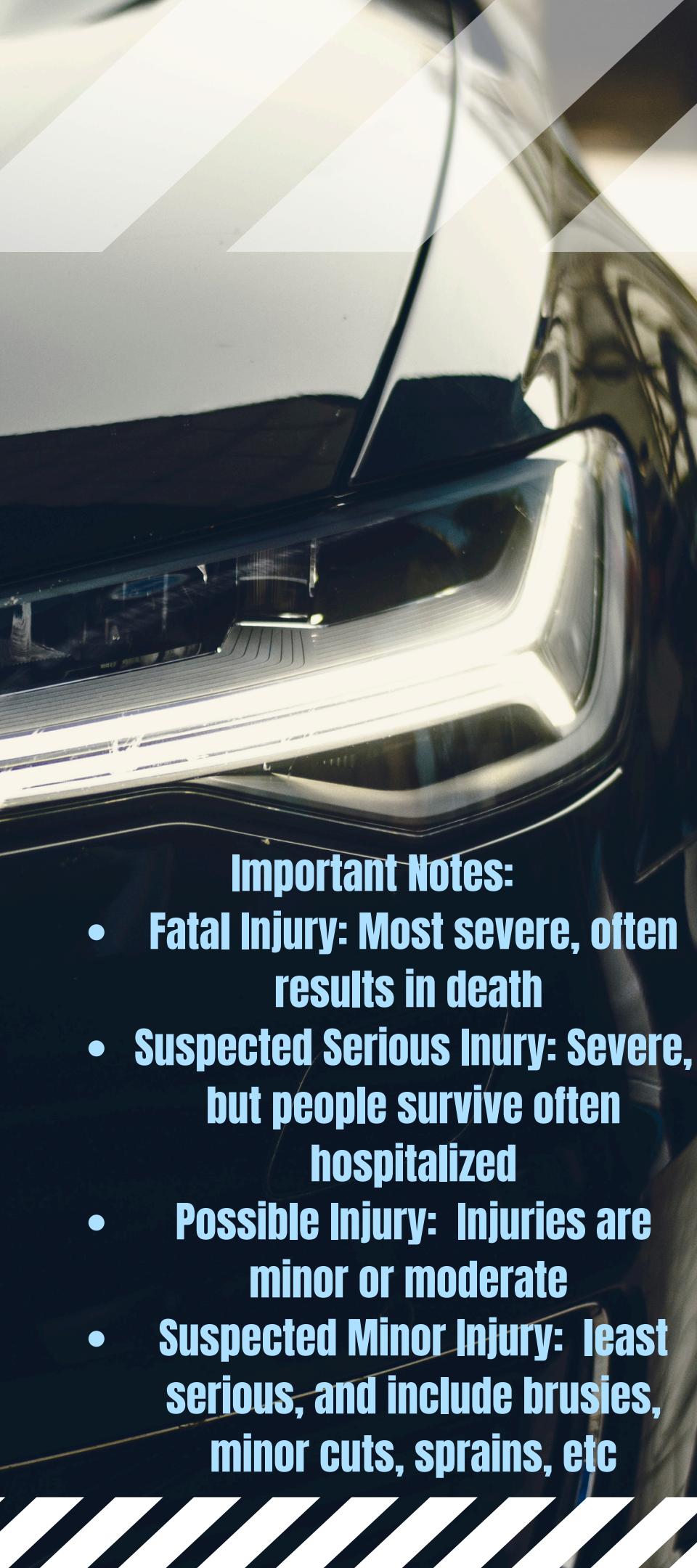
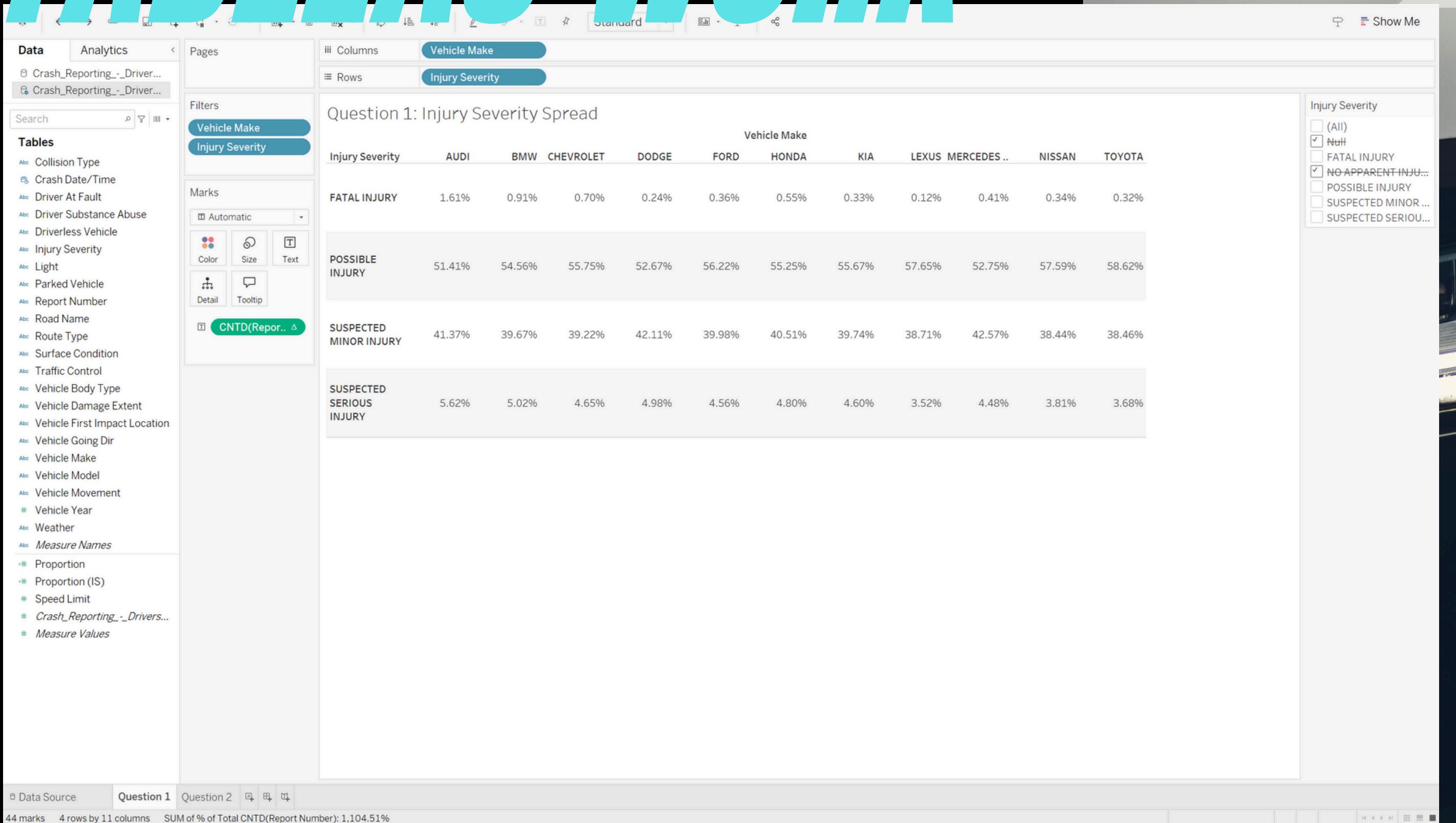
- How does the severity of injuries in car collisions vary within a vehicle's make?



TOYOTA



TABLEAU WORK



IMPORTANCE

- Helps guide customers in making informed decisions about a vehicle's safety. They can better understand which car manufacturer may offer better protection in the event of a car crash.
- Manufacturers can use this data to enhance safety features within their car lines if the injury severity in their car crashes tends to be more severe rather than minor.

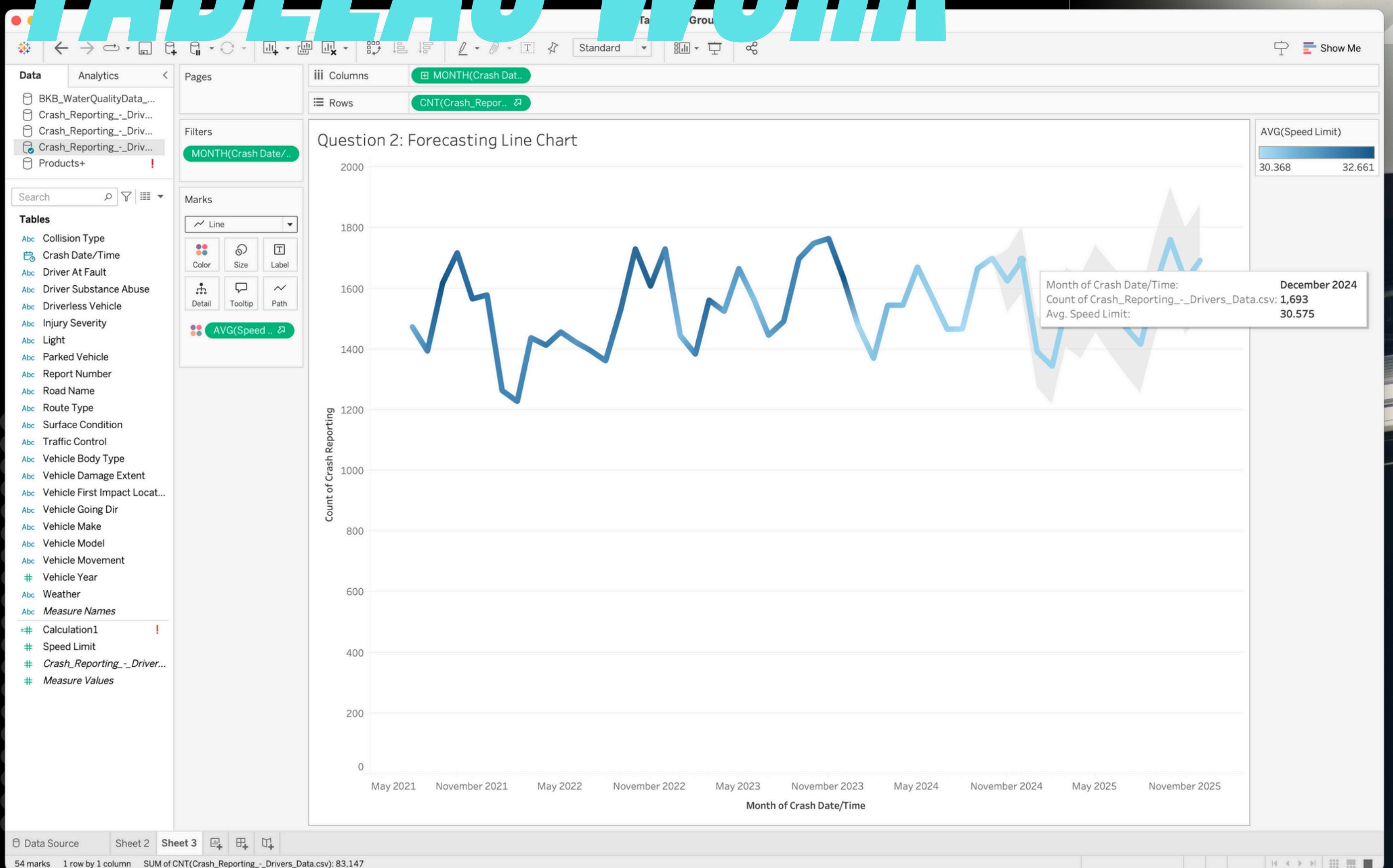


QUESTION 2

■ Based on post-Covid monthly statistics, what is the forecast for the amount of crashes per month and the change in average speed limit?



TABLEAU WORK



Important Notes:

- peak crashes at the end of every year (holiday season)
- drops in February (can be due to weather in Maryland)



IMPORTANCE

- Forecasting the future can inform law enforcement of what to expect on certain dates in regards to accidents
- Find correlation between the time of year and crashes (ex. Holiday Season, sporting events, etc.)



THANK YOU

Q&A