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JosephDenney Update README.md ...

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Chicago Crash Analysis



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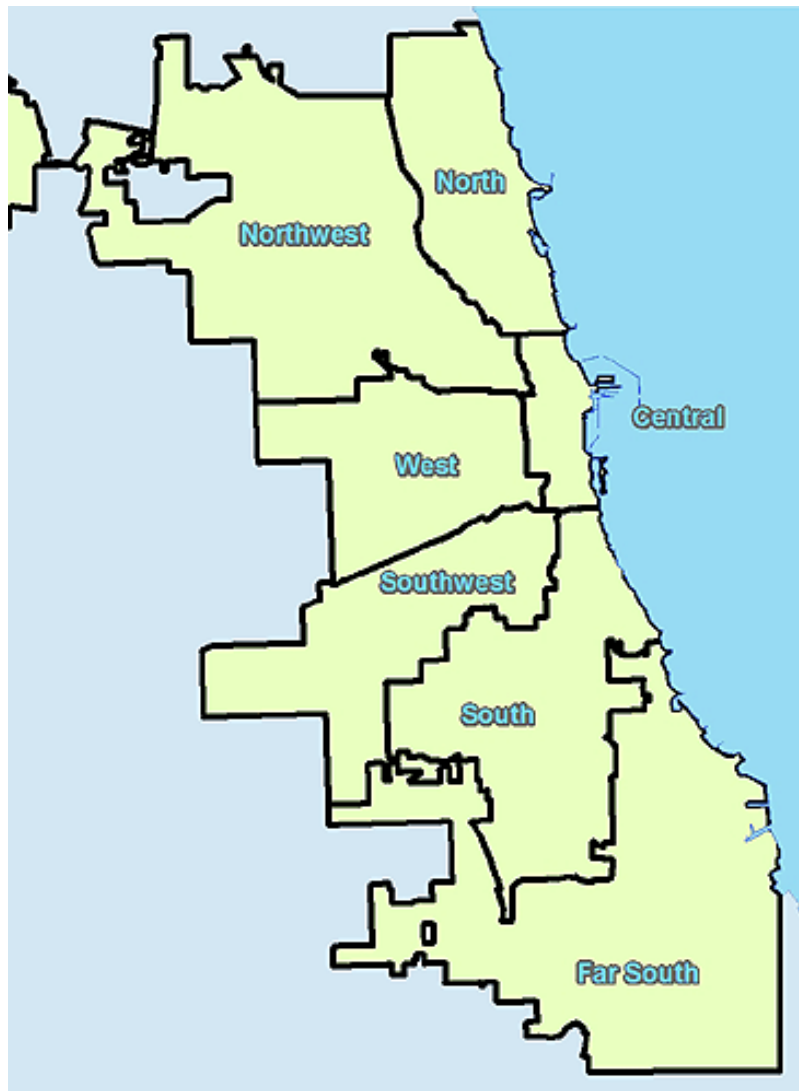
Outline

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Purpose

To provide some insight into how and why traffic accidents happen in order to promote safer habits in and around the city of Chicago.

Chicago City Map



Description of Data

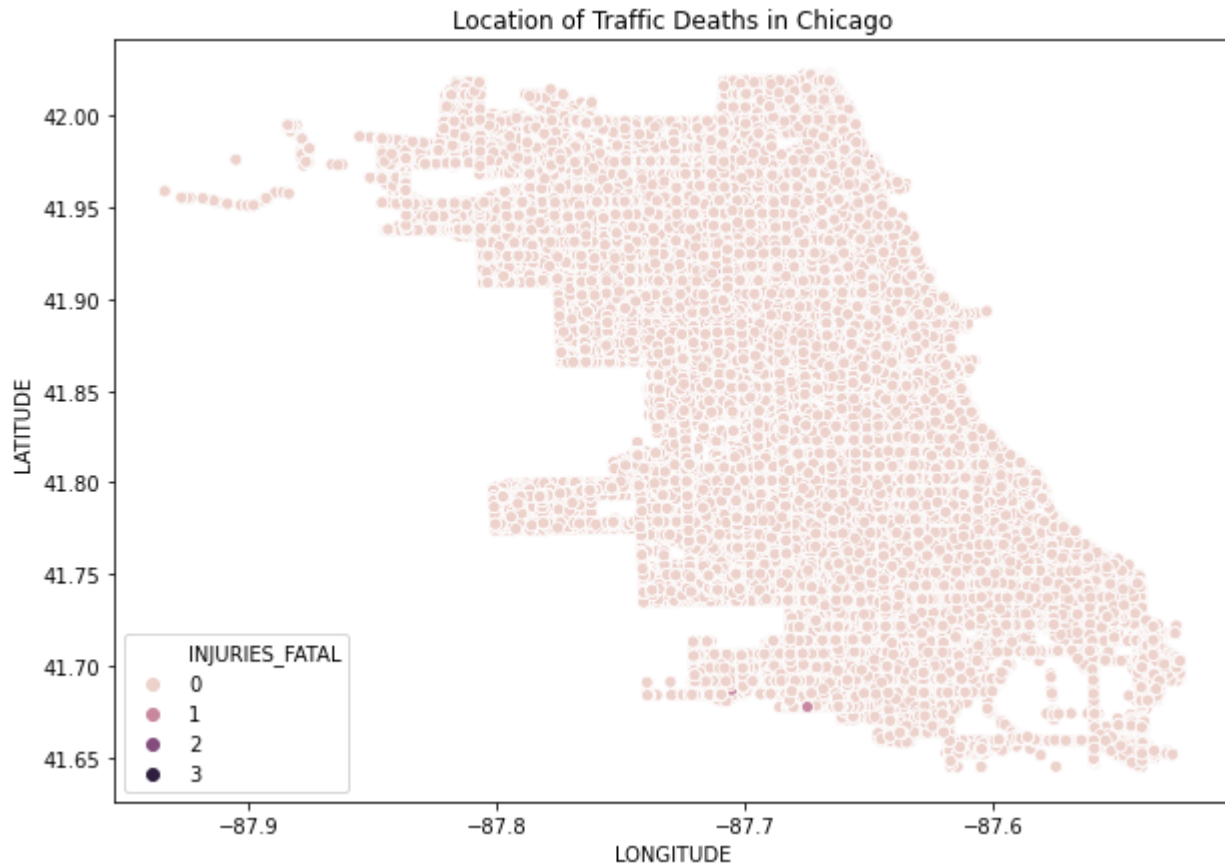
<https://data.cityofchicago.org/Transportation/Traffic-Crashes-Crashes/85ca-t3if>

Main Questions

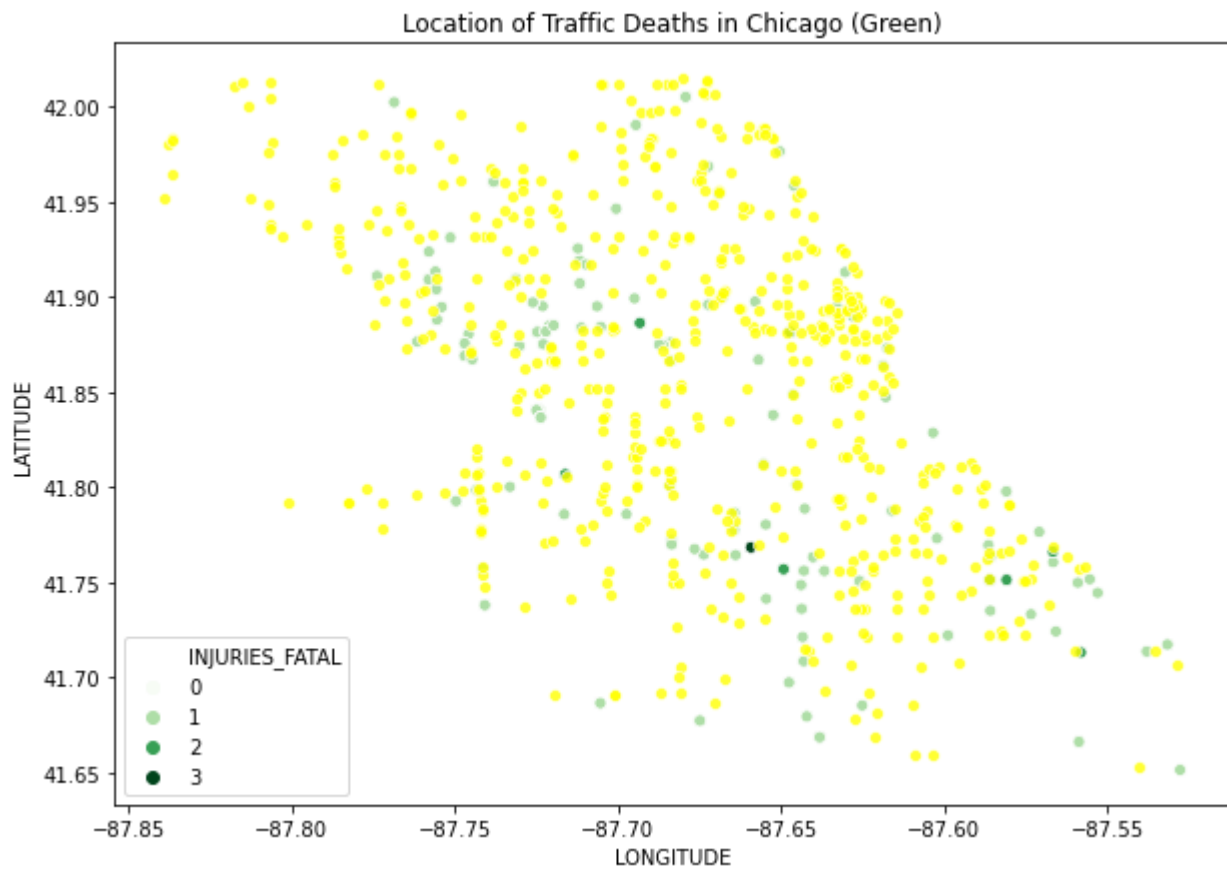
- Question 1: What parts of Chicago have the most traffic fatalities?
- Question 2: What times of the day and on what weekdays are traffic collisions more common?
- Question 3: What vehicle defect is most common in reported crashes in the Chicago area?

Summary Conclusions and Insights

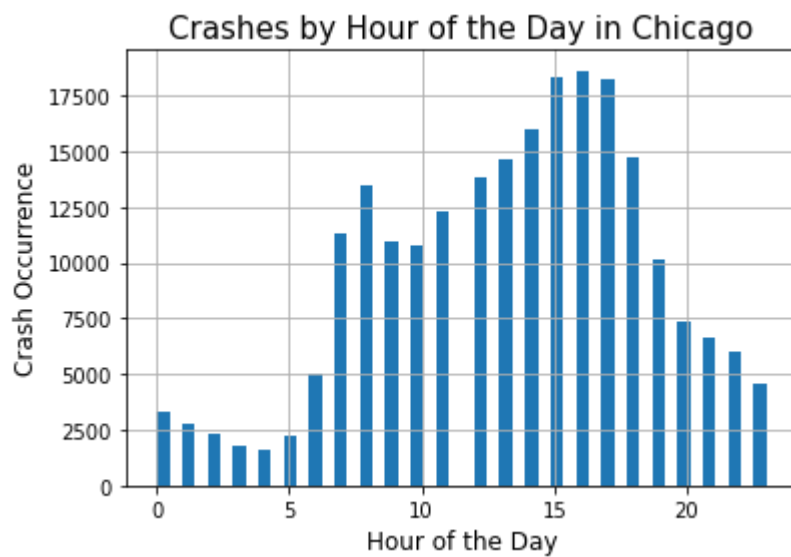
- Question 1 Answer: We can see that there is no discernible pattern to location. In the Graph above we can see the outline of Lake Michigan along the upper righthand side, with fatal accidents present at random locations around the Downtown Chicago Area.
- This graph merely illustrates the numerous accidents that occur in the Chicago area (as well as showing the shape of the city limits) without fatalities.

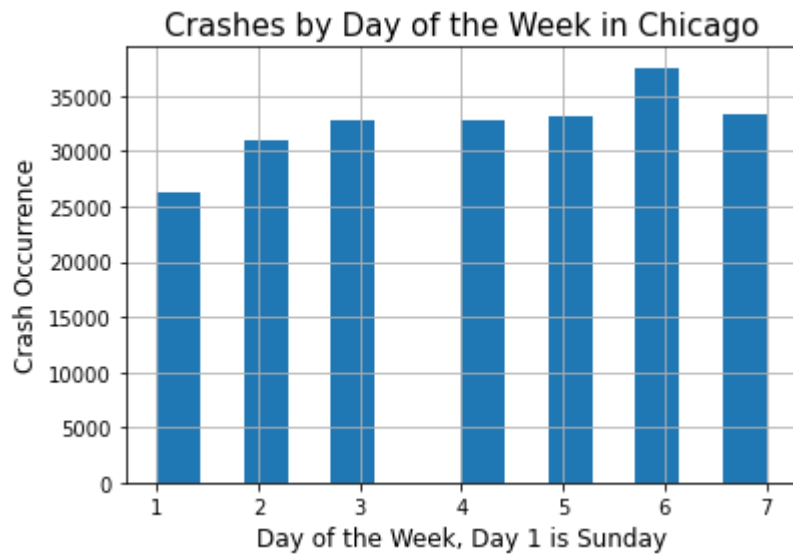


- The following graph depicts fatalities in the Chicago area in green (darker green for multiple deaths in a single incident). Yellow dots indicate non fatal incidents and serve merely as reference to provide context for the general shape of the city.

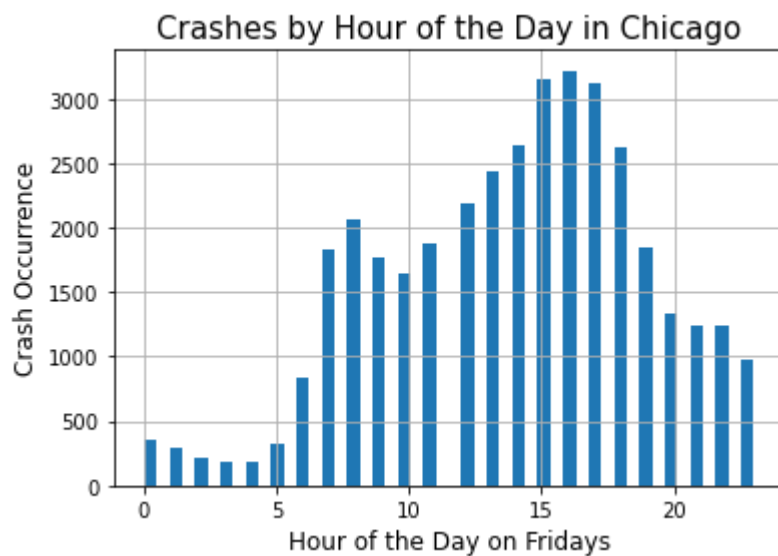


- Question 2 Answer: The hours between 2 and 6 pm see elevated accident rates - this is invariably because of rush hour when there are simply more vehicles on the roads and increased opportunity for accidents. While there are more accidents on Fridays, the pattern for accidents by the hour is much the same as the rest of the week.

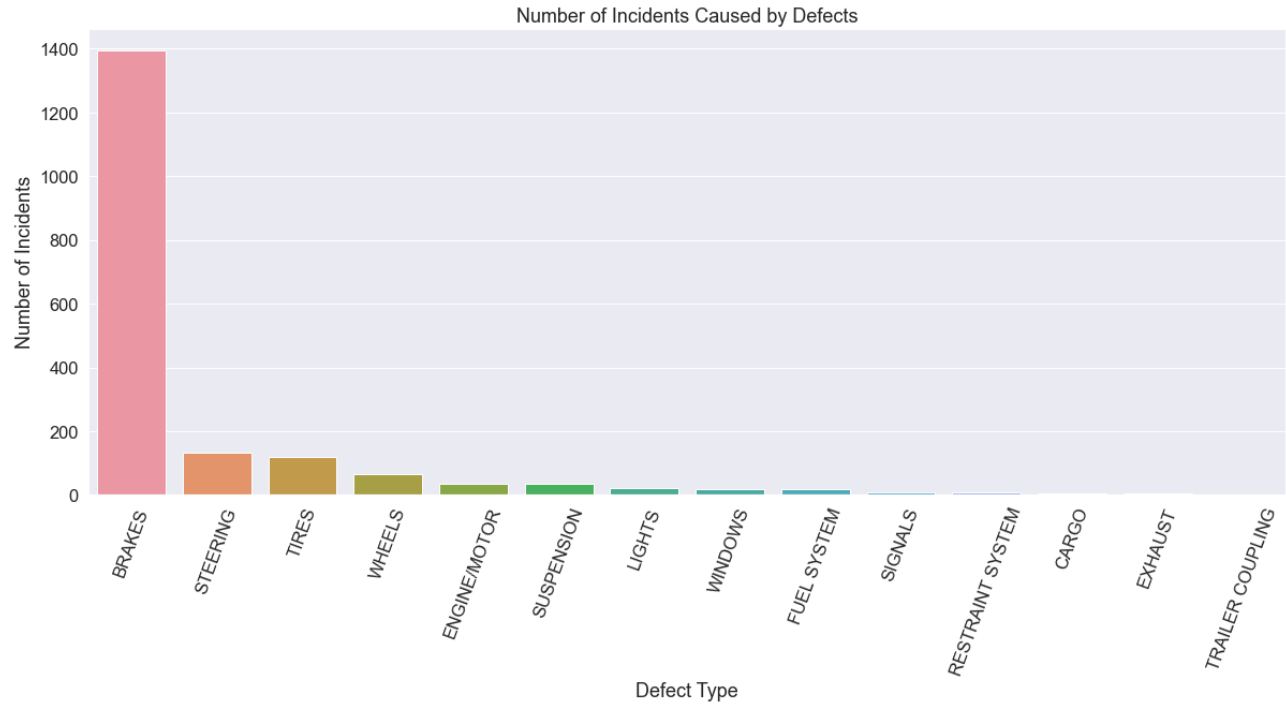




- The graph below isolates Friday (when there is an increased chance of an accident) and breaks out by hour. The graph is very similar to the hourly breakdown for the full week.



- Question 3 Answer: There is no vehicle defect for the majority of accidents in the Chicago Area. However, when a vehicle defect is listed, the majority of accidents are caused by malfunctioning brakes. Brake inspections for state registrations could be more demanding of individuals' vehicles



- Note: The above graph represents the small portion of accidents that have a malfunctioning vehicle as their root cause. However, it is clear that routine brake maintenance is key to eliminating the risk of vehicular failure!

Future Work

- Break out by the day statistics to discover accident causes by the day.
- Break out by the hour statistics around rush hour to discover (besides extra traffic) why accidents occur more often in the mid-afternoon.
- Differentiate between features that occur or exist before an accident as opposed to those features that are a result of the collision itself.

Thank you!

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