Chicago Crash Data Analysis

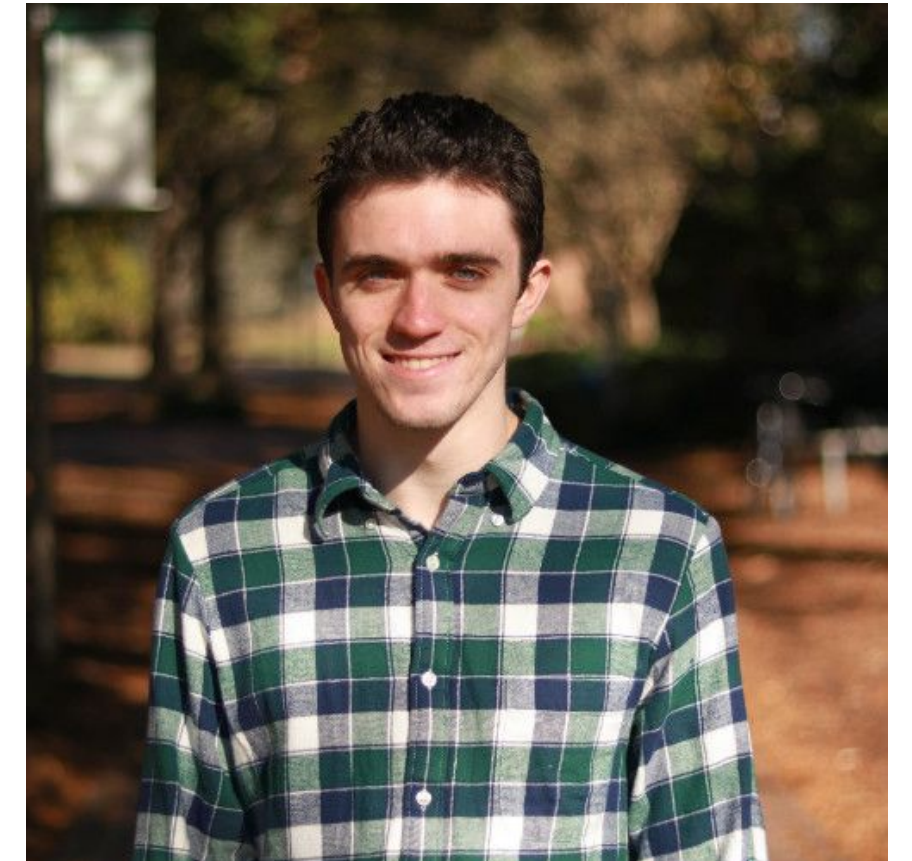# Meet our team

Sean Harris

GitHub Lead

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Morgan Goode

Tech Lead
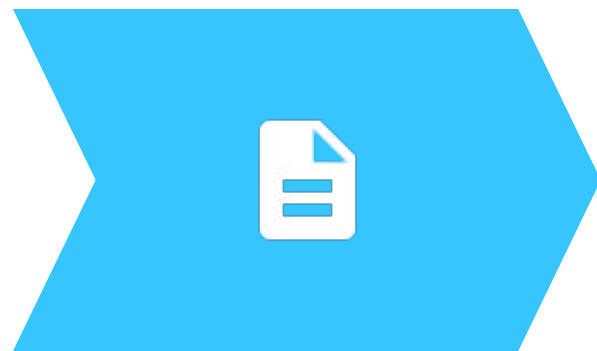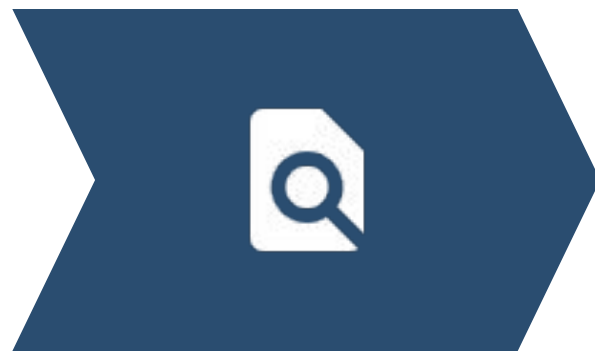
[LinkedIn](#)

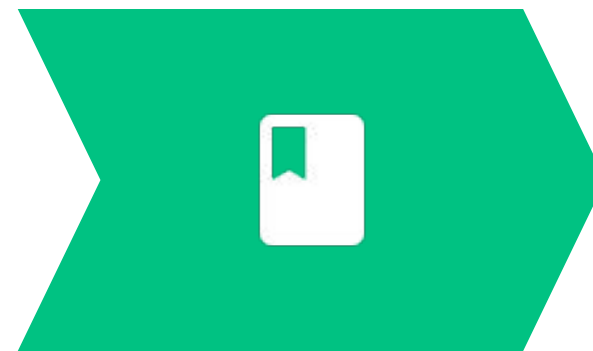**Jimmy McLaughlin**

Presentation Lead

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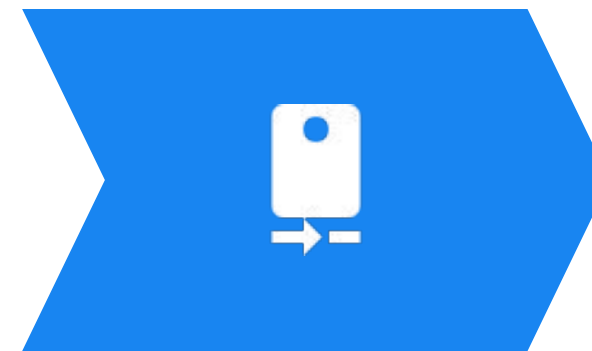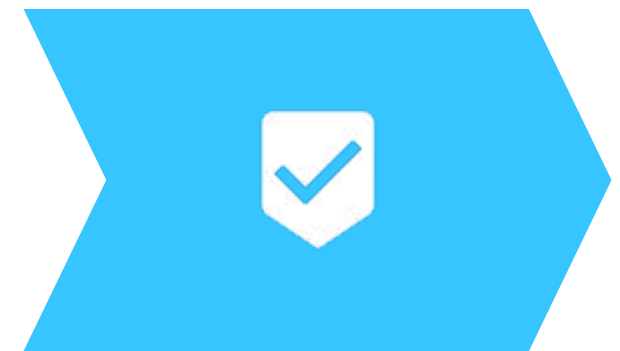# What we will be discussing today
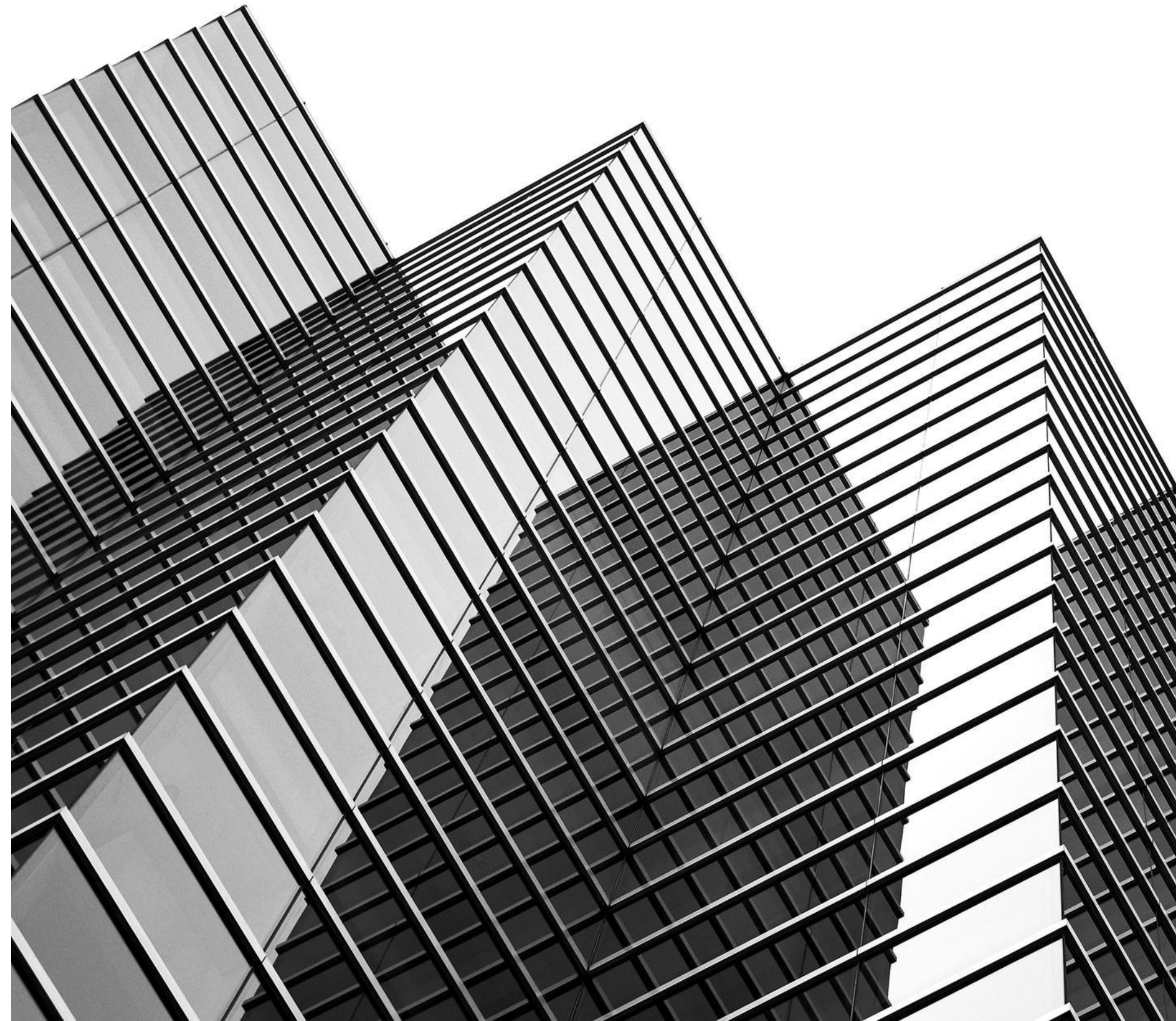
Business Problem

Data Limitations

Data Visualization

Findings

Next steps

Business problem

What impact does being under the influence have on a person's odds of dying in a car crash?

Bottom Line

Odds of fatalities/severe injuries are **13%** higher with an impaired driver.

Data & Limitations

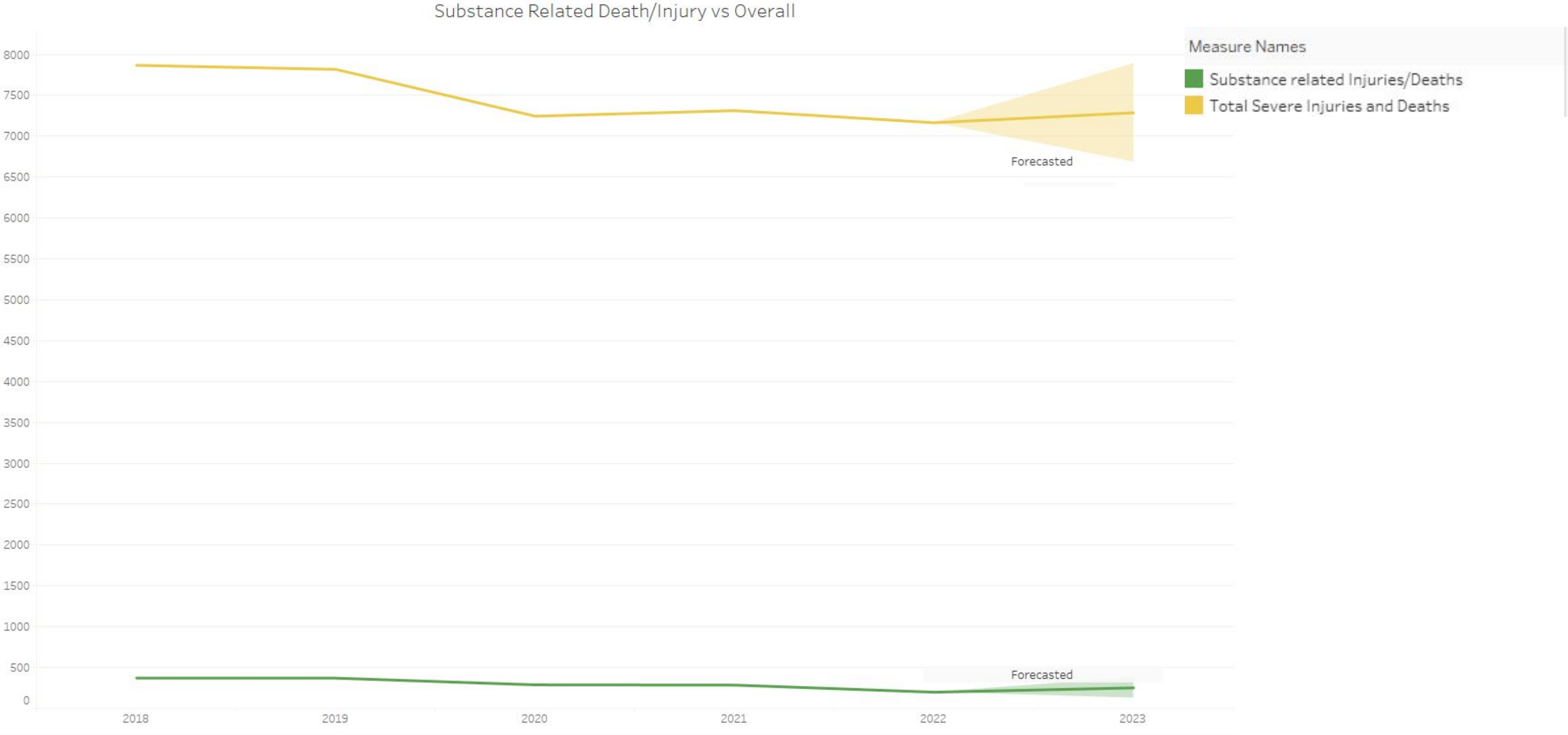|	
SOURCE	Chicago Data Portal
DATASETS	Crashes and people involved in crashes-filtered to 2018 and after
SIZE	7.7k crashes, 13.3K people
LIMITATIONS	Officer reported data, subject to interpretation and human error

Visualizing crash data

Crash deaths have risen over the last few years...but alcohol related deaths haven't

Substance Related Death/Injury vs Overall

Measure Names
- Substance related Injuries/Deaths
- Total Severe Injuries and Deaths

Forecasted

Forecasted

Crash fatalities across Chicago where driver was under the influence
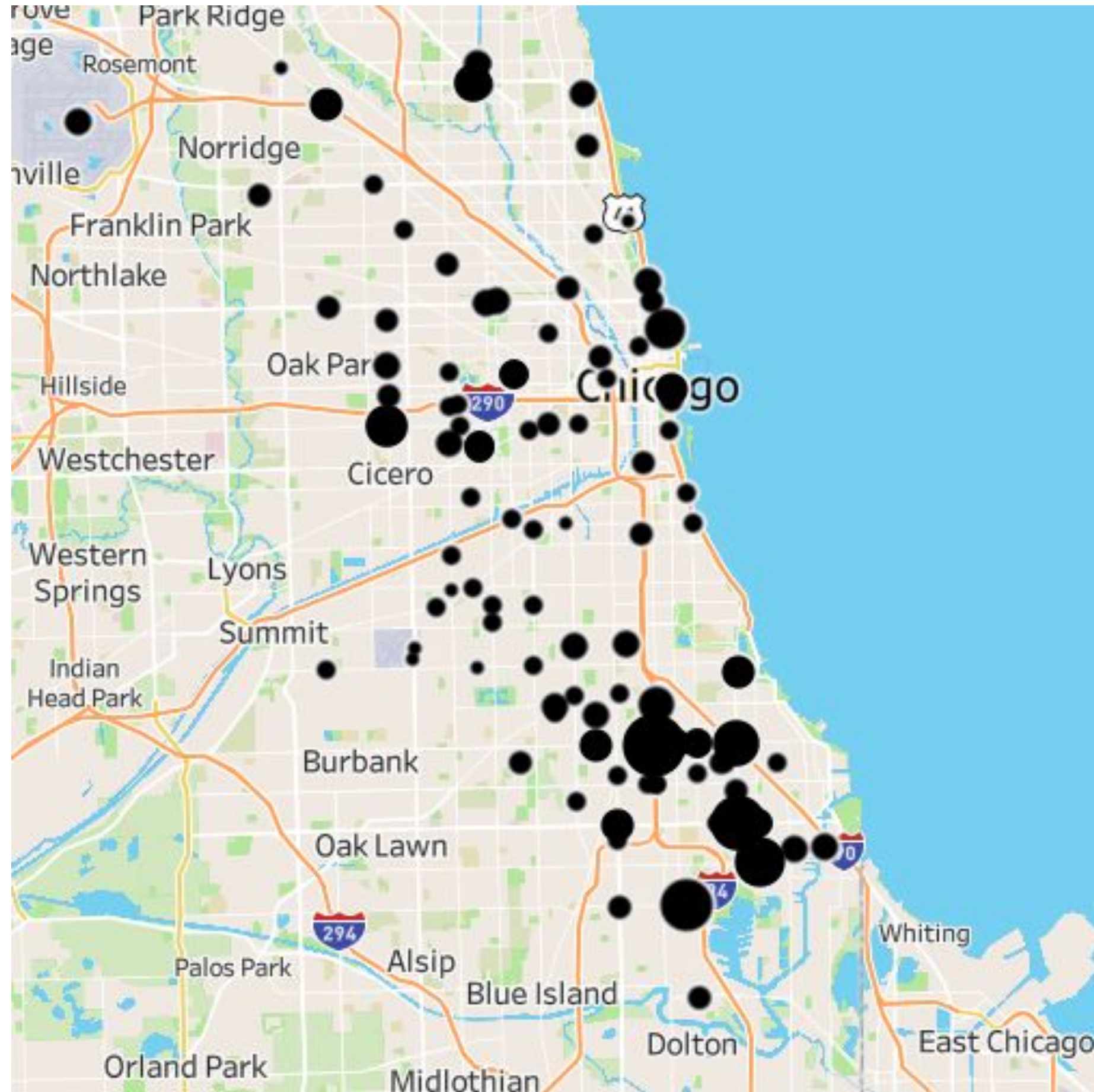
Driving under the influence is one of the deadliest crash causes

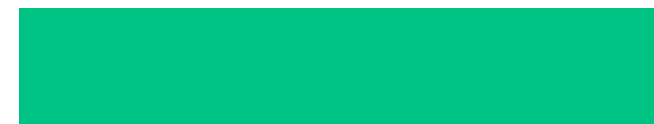Highest death rates by primary accident cause
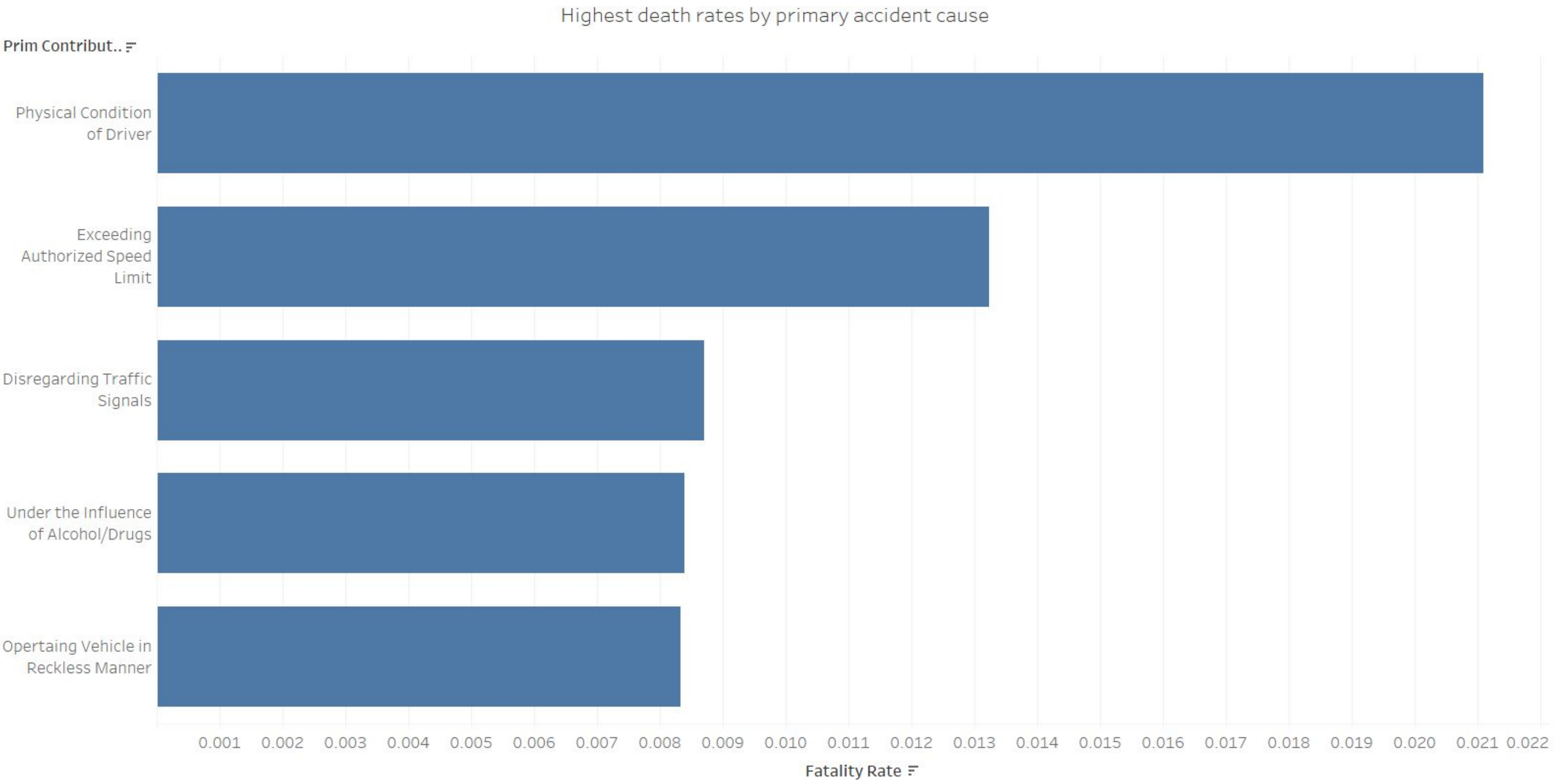
Modeling death and serious injuries

Logistic Regression Model

Accuracy of 70%

Recall of 99.97%

Precision of just 7.46%

Findings from models

- **An impaired driver has 13% higher odds of fatality or severe injury**

- **Drivers have 50% less odds of death or severe injury**

- **Men have 9% higher odds of death or severe injury from a crash than women**
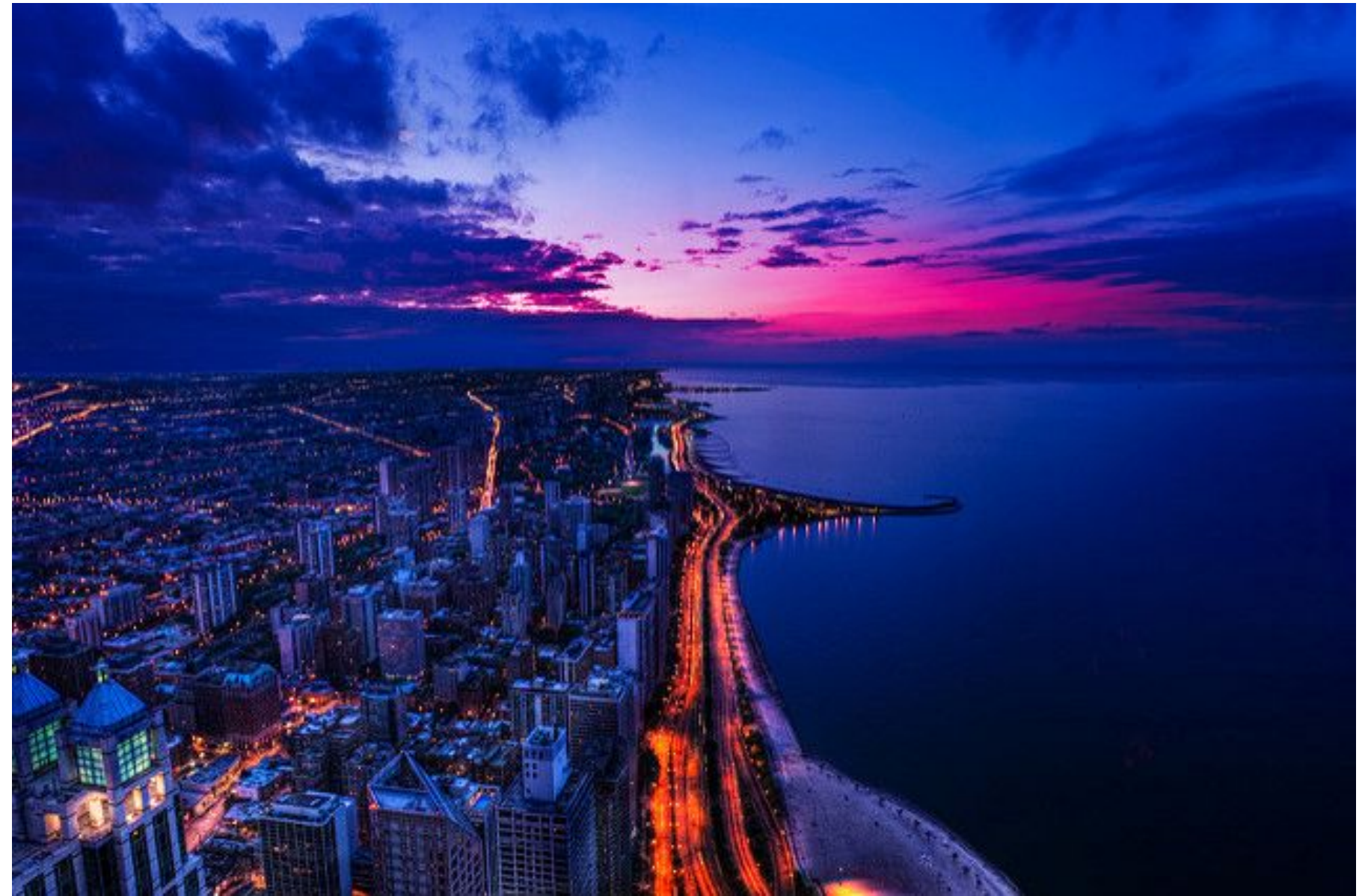
Recommendations

- Consider change to hit and run policy

- Follow up with survivors

- PSA targeted at passengers and cyclists

Next steps

- **Investigate high-volume crash areas**

- **Examine impact of hospital on survival**

- **Analysis on repeat offenders**
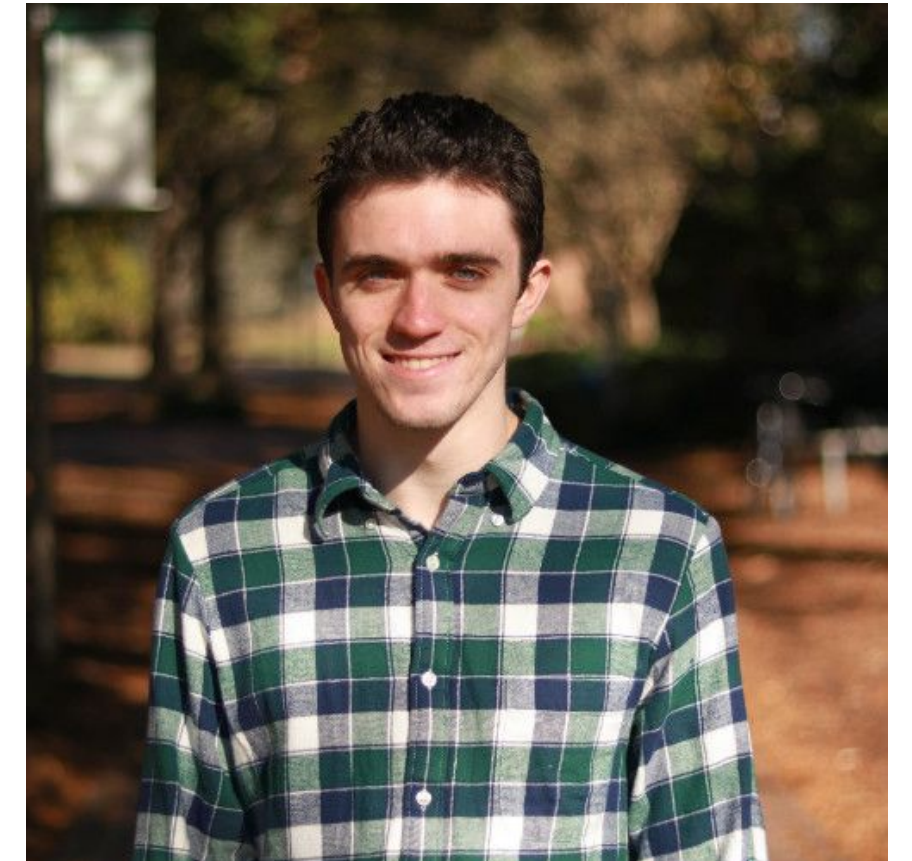
Questions?

Sean Harris

GitHub Lead
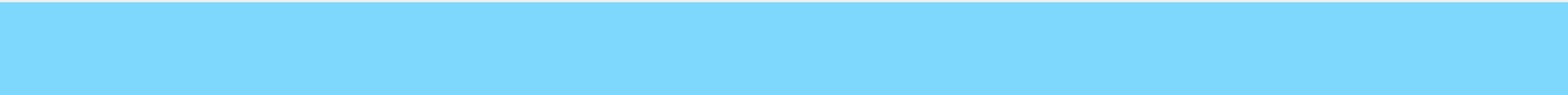
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Thanks for Listening

Appendix

Higher Proportion of Injuries for 18-24 year olds

Count of Injury While Intoxicated by Hour