

# Chicago Department of Transportation

## Injury Detection & Reduction

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In partnership with Vision Zero



# Current Problem

How can the city of Chicago decrease injuries from traffic accidents?



# Data:

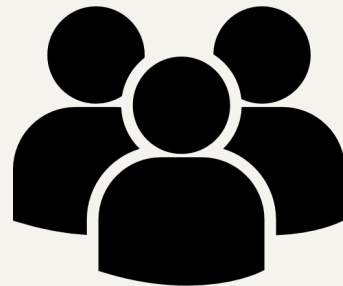
## Chicago Department of Transportation Open Data



**Crashes**

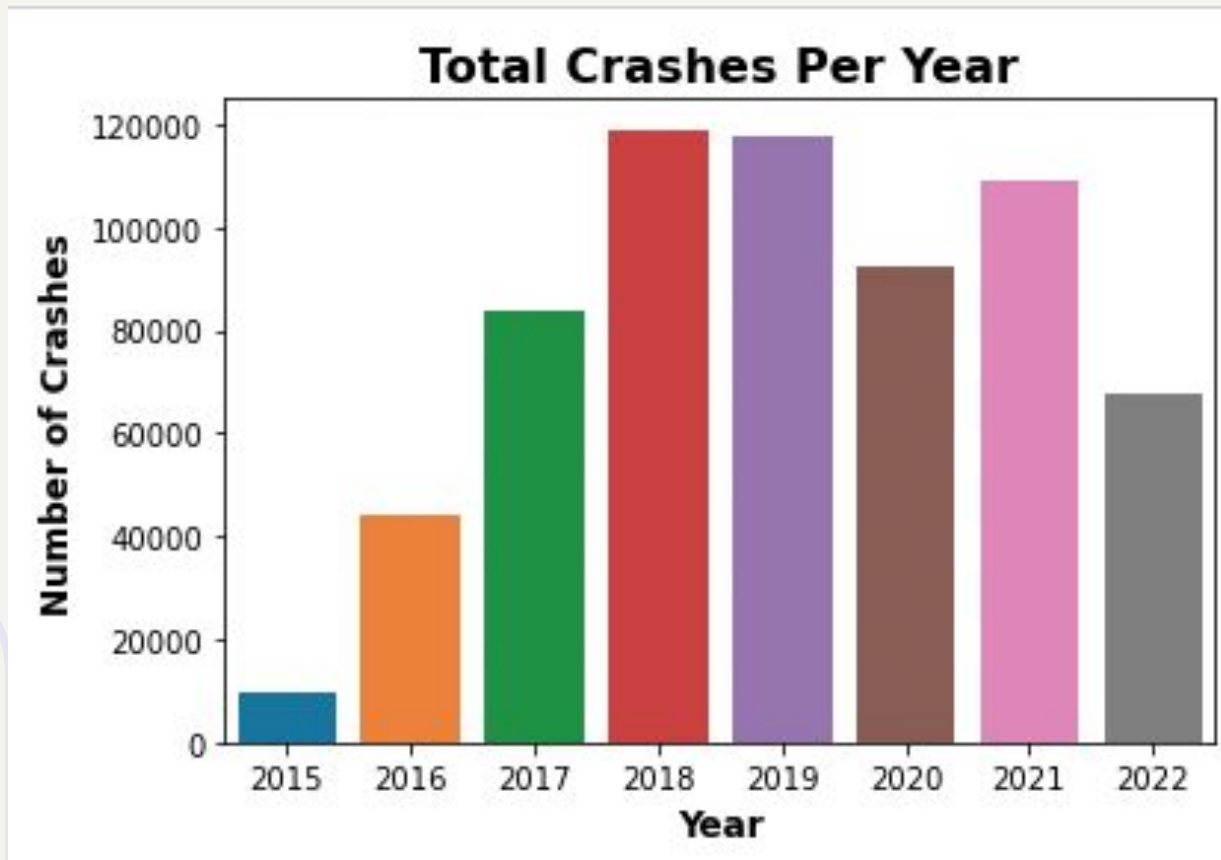


**Vehicles**

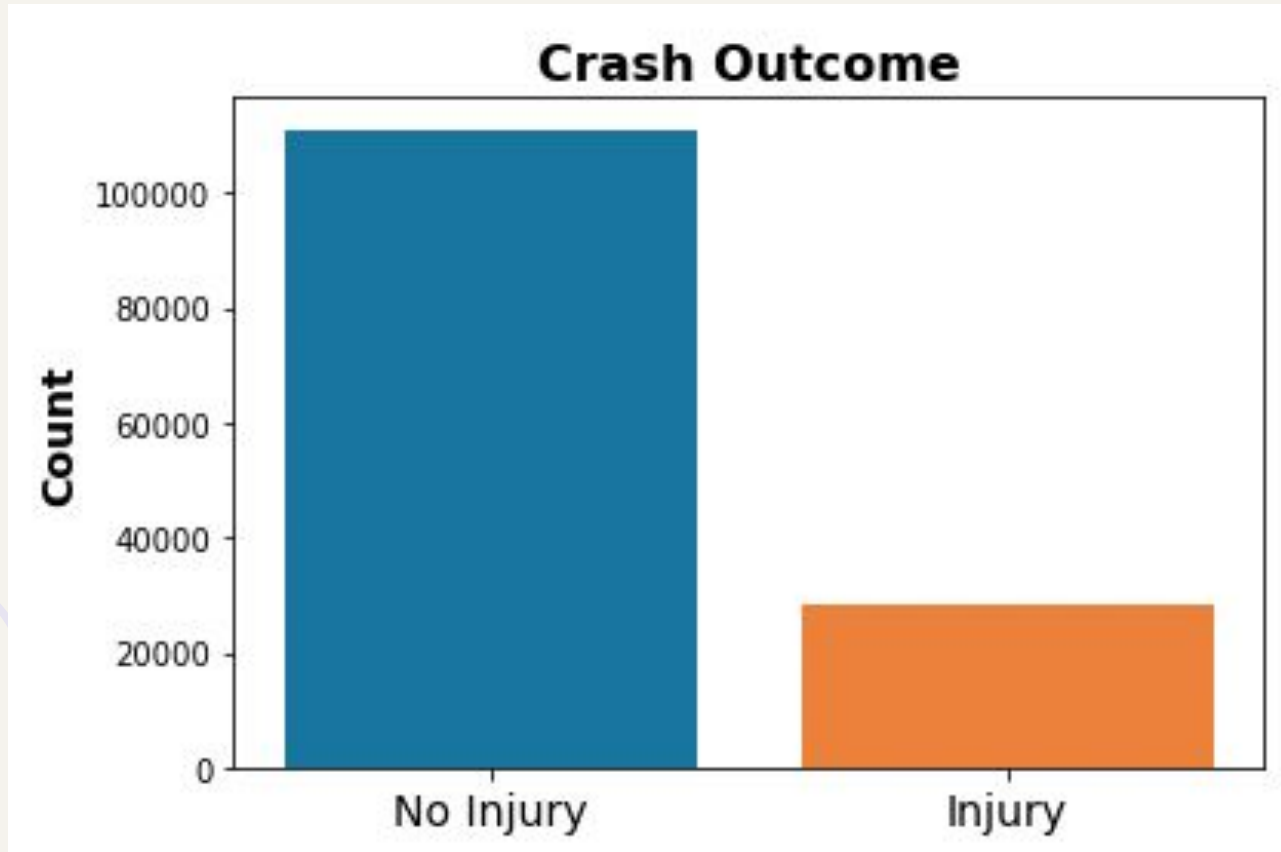


**People**

# The Trend



# The Trend - 2021



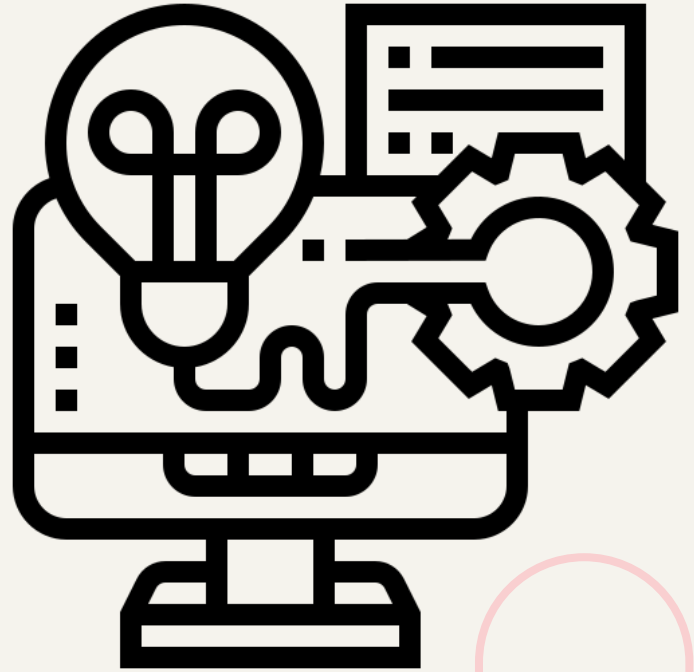
# Methods

**Create a model to predict:**

- Injury present

**Use model to determine:**

- Top factors

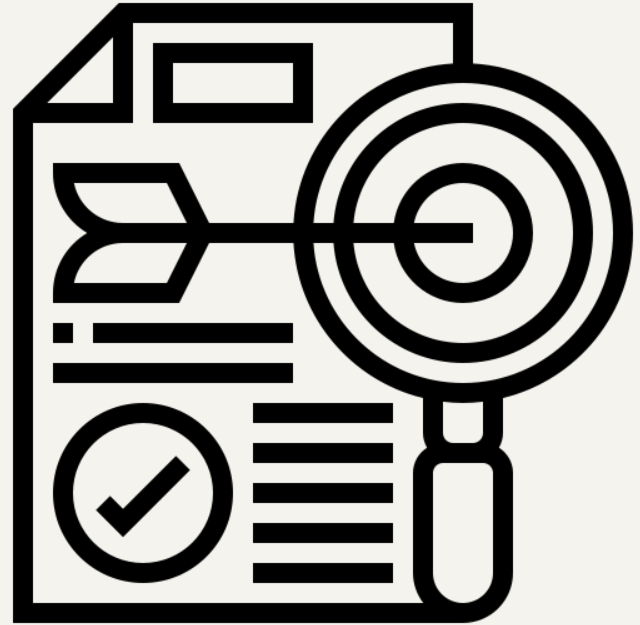


# Results: Final Model

Included 17 features

Performance

- 81% Accuracy

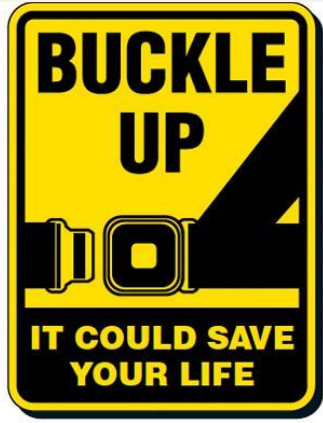


# Results: Top Factors

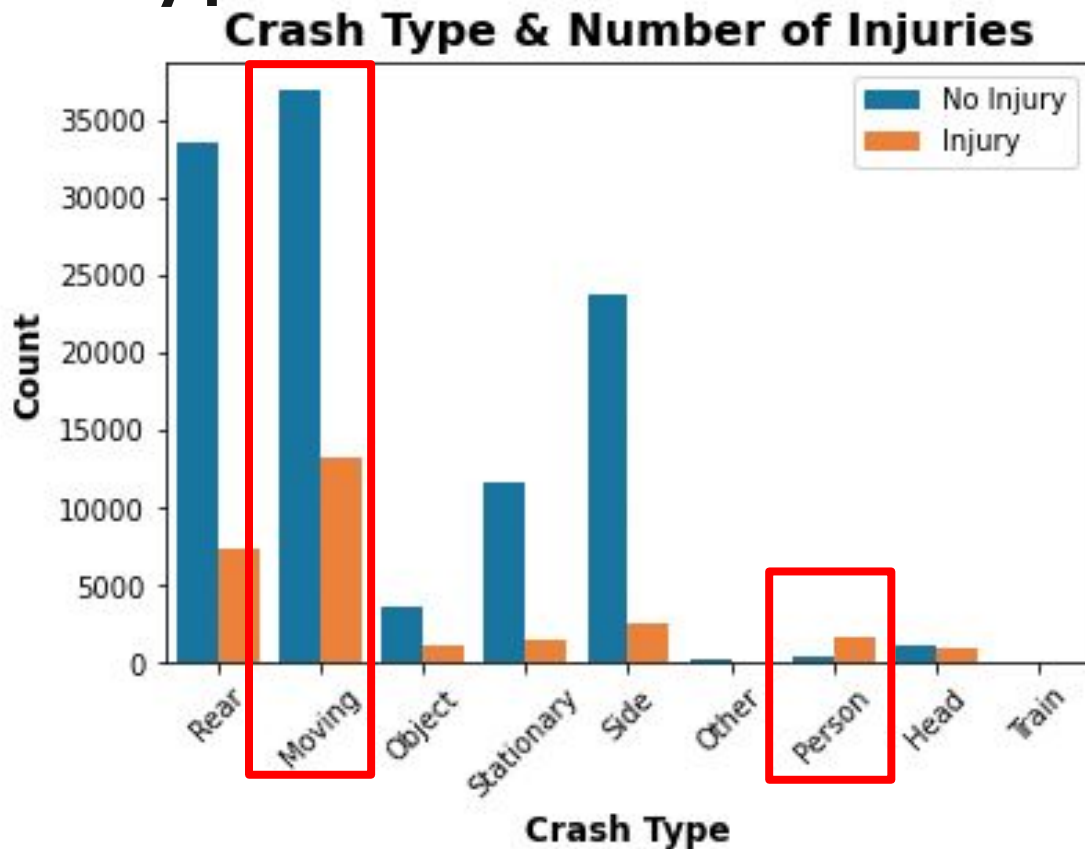
- 1. Safety Equipment**
- 2. Crash Type**
- 3. Day of Week**
- 4. Time of Day**



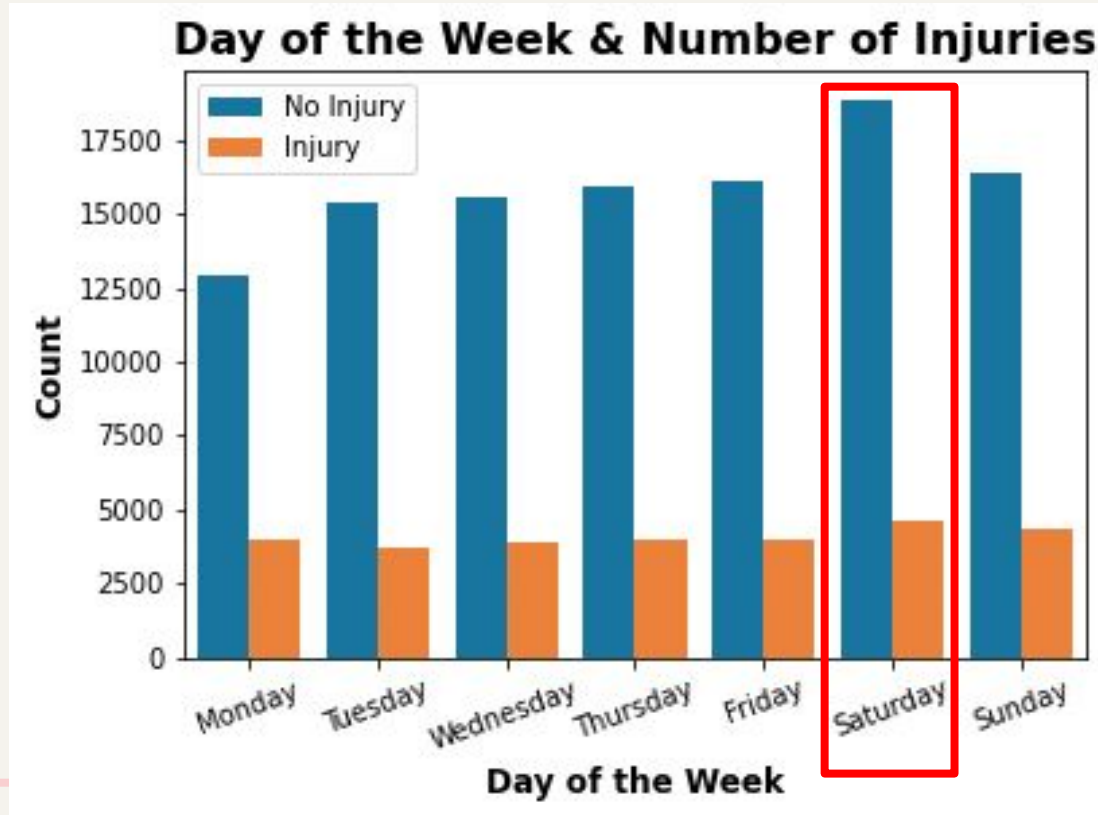
# Results: Safety Equipment



# Results: Crash Type

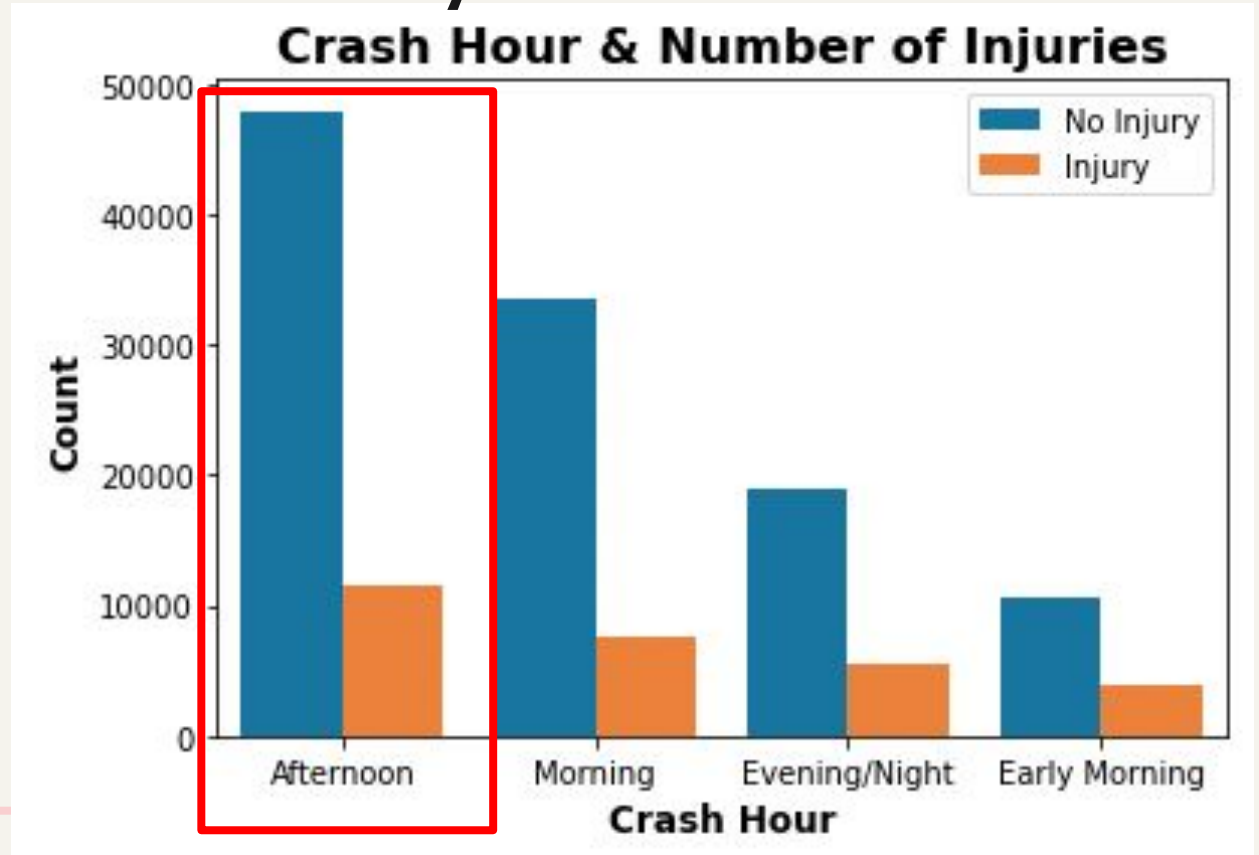


# Results: Day of the Week



# Results: Time of Day

- 42% in afternoon between 12pm & 6pm



# Recommendations

Public Transit



Safety



Targeted Response  
Windows



# Thank you!

## Questions?



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