# Non-Technical Presentation - 10/28/24

## Project Phase #3

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# Business Problem

Predict the future car crashes in Chicago and draw recommendations to help the city allocate resources more efficiently & anticipate damages

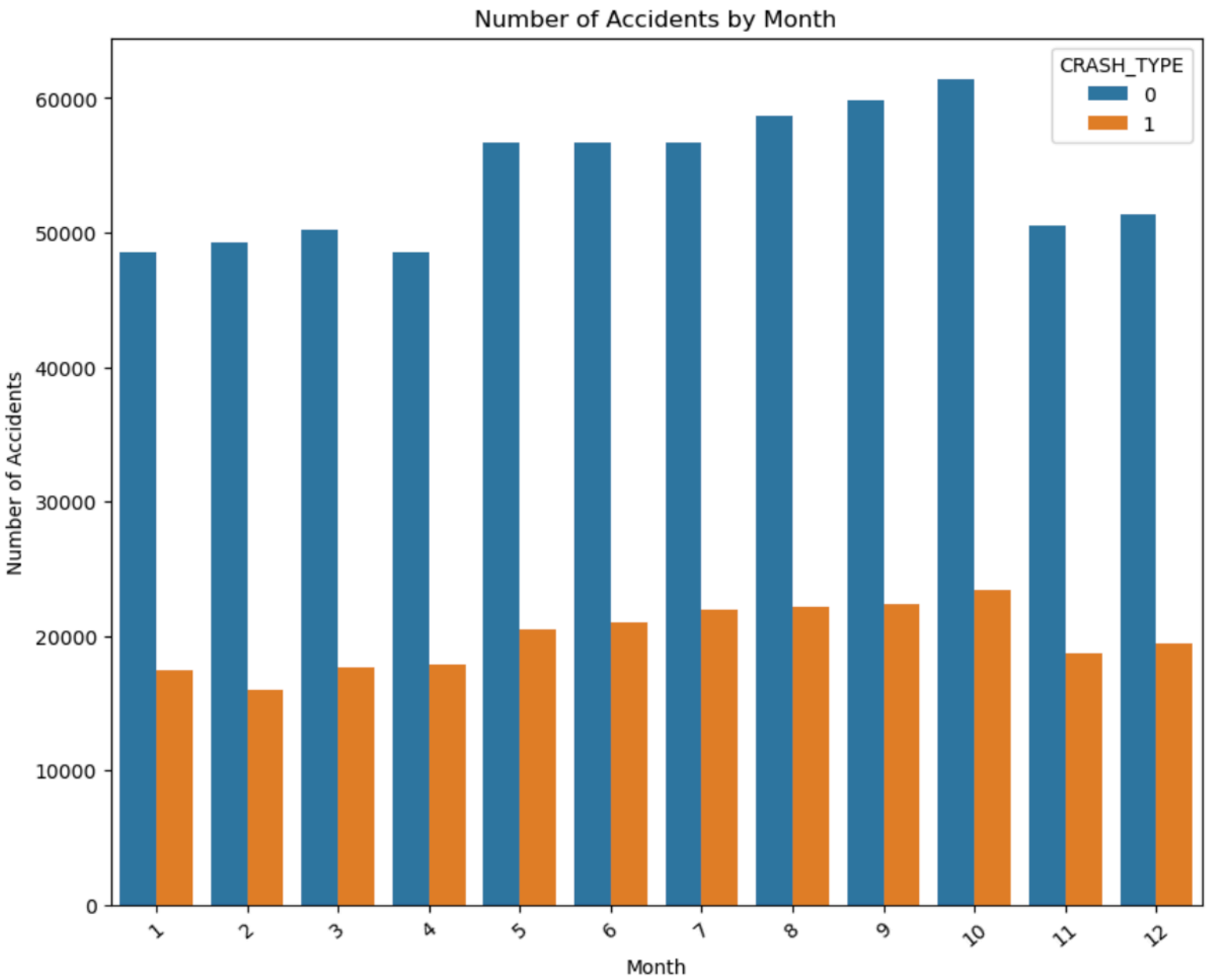
# Stakeholder

Mayor of Chicago

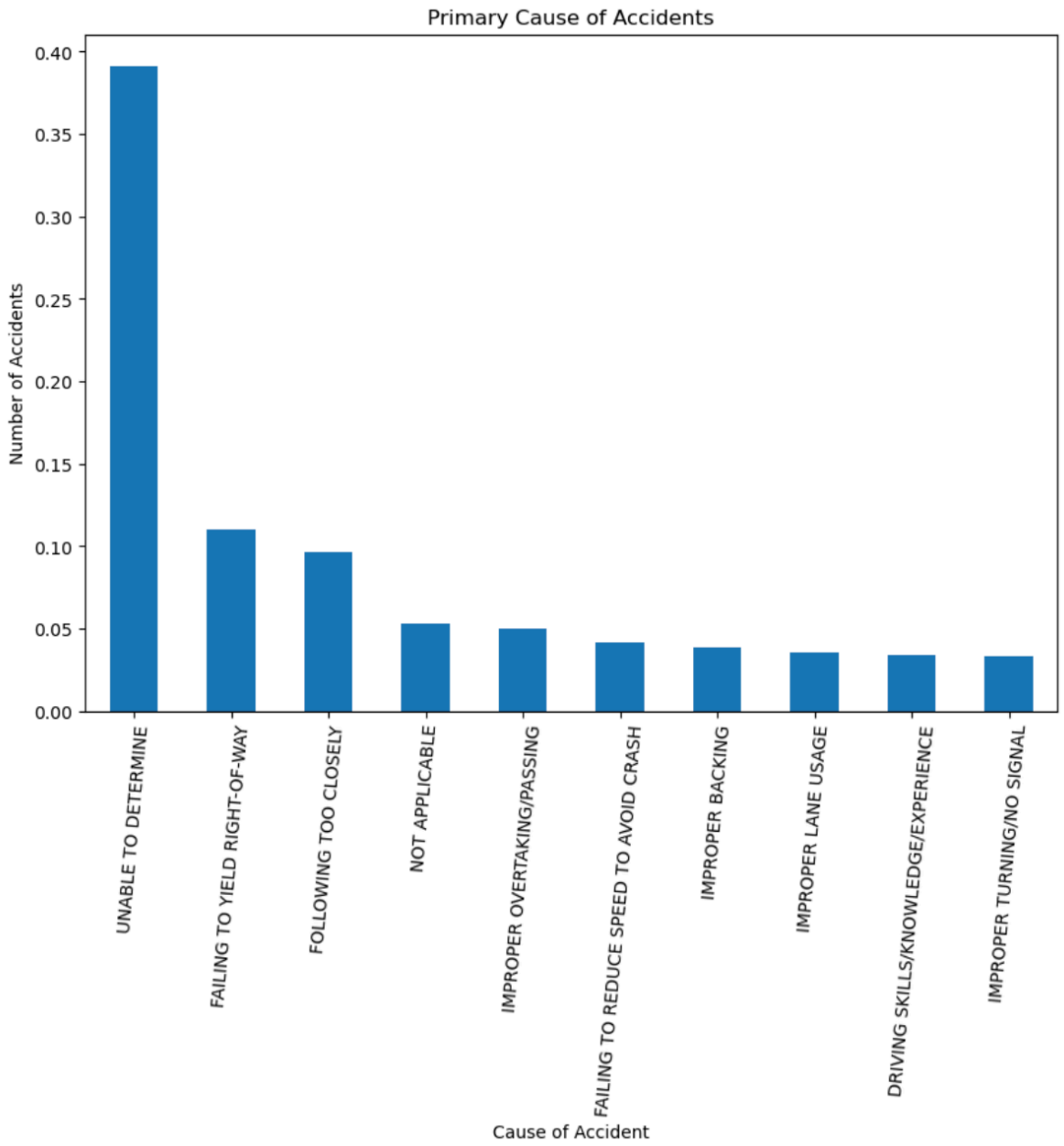
# Data

Source: Chicago Police Department
Link: https://data.cityofchicago.org/Transportation/Traffic-Crashes-Crashes/85ca-t3if/about_data

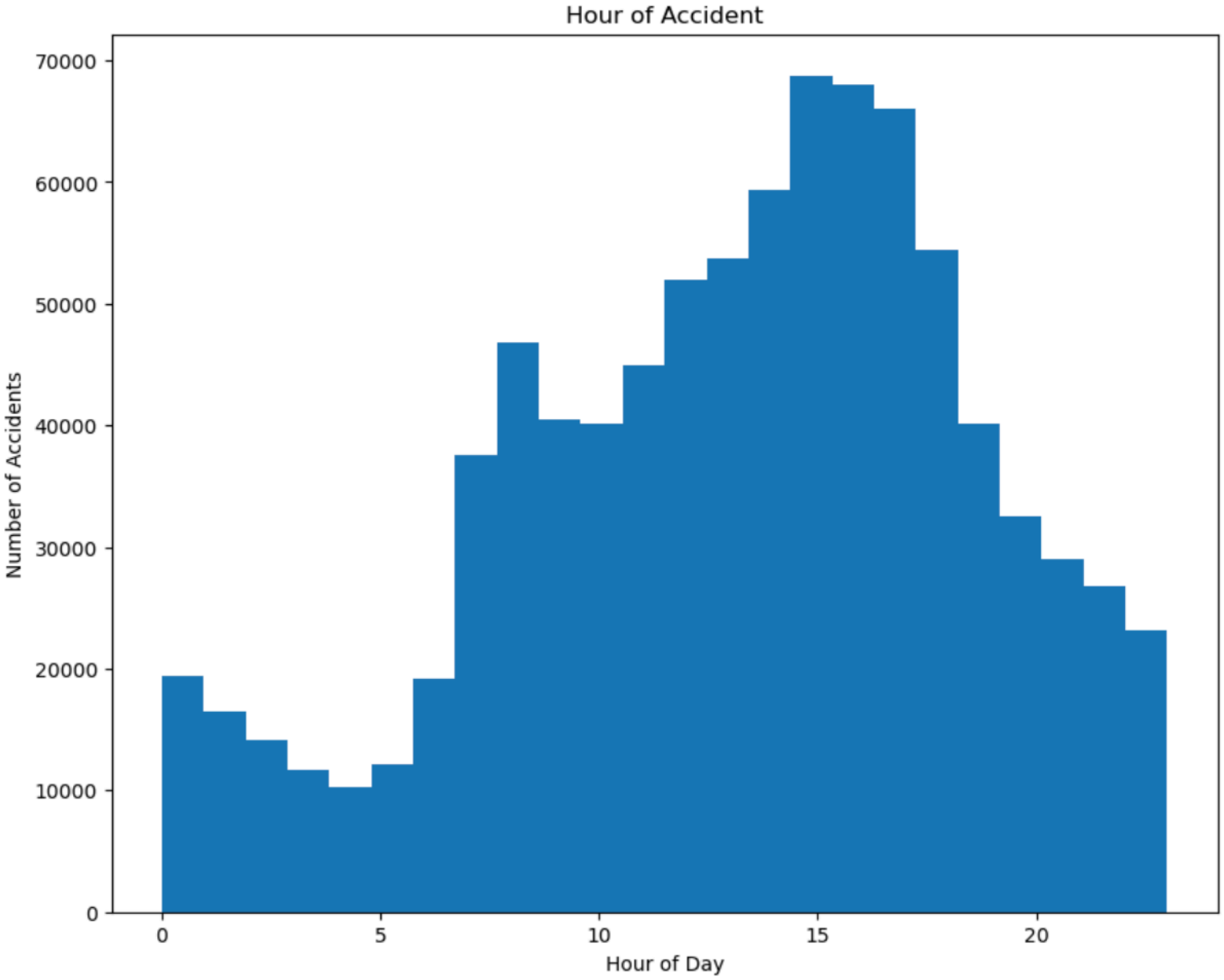
# Number of Accidents by Month



# Primary Cause of Accidents



# Hour of Accident



# Model #1 - Logistic Regression

```
f1 score Train: 0.7562583116296159
f1 score  Test: 0.7568711596605872
Accuracy : 0.8875932288989296
```

# Model #2 - Decision Trees

```
f1 score Train: 0.9939917073333407
f1 score Test : 0.6976193629560956
Accuracy : 0.8352768233182725
```

# Model #3 - Pipeline using StandardScaler

```
f1 score Train: 0.7633105243898095
f1 score Test:  0.7635985903870611
Accuracy : 0.8901950704796948
```

# Recommandations to the Mayor of Chicago

**Allocate more emergency resources during during the summer season**

**Put more police and ambulances on standby during peak hours (morning and evening rush hours)**