Austin Bicycle Accident Property Damage High-Low Prediction
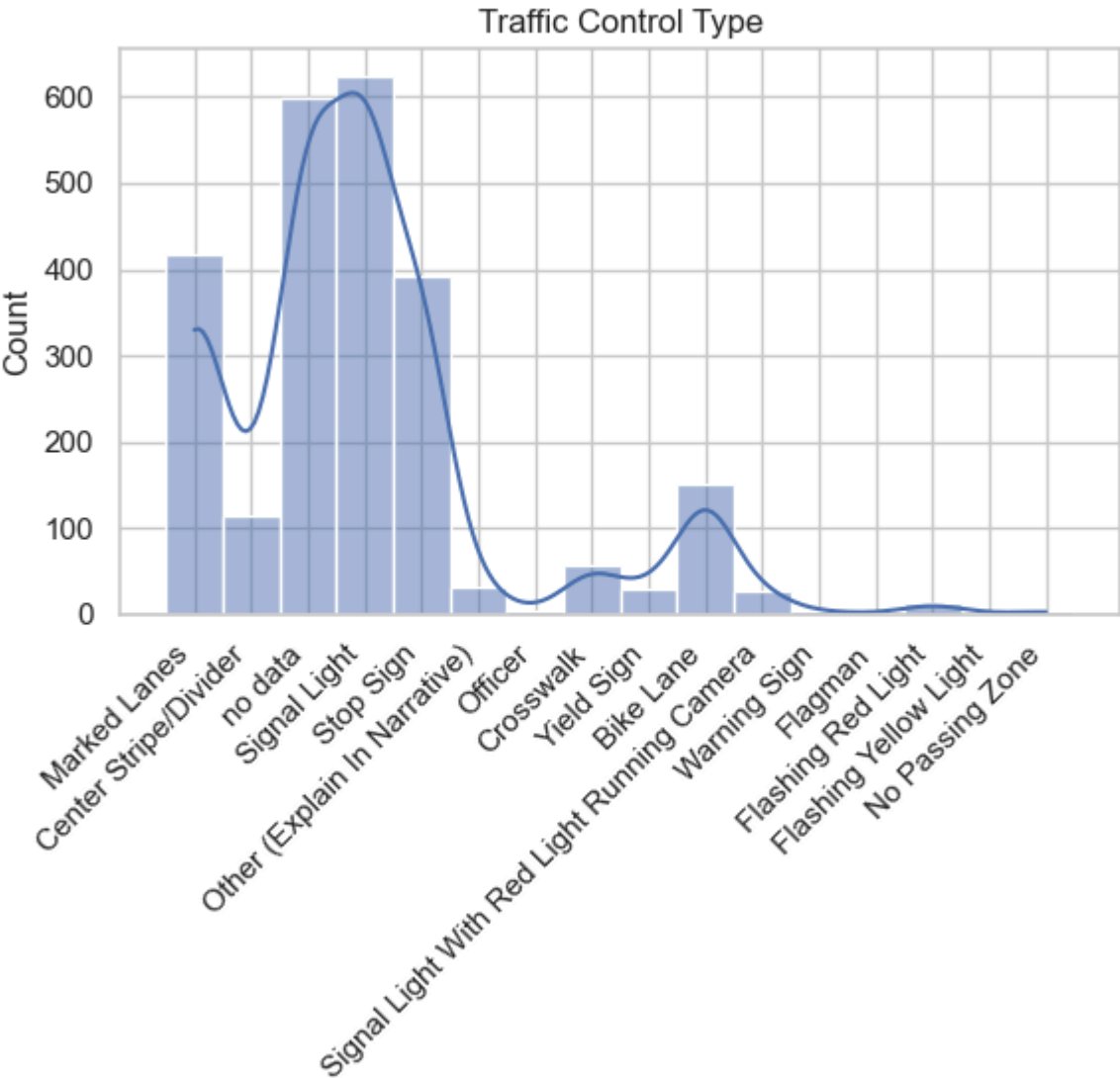
Based on about 2,500 bike crash records from Austin, this program uses a logistic regression model to predict the level of property damage caused by traffic accidents, and predict whether the property damage will be higher than $1,000.
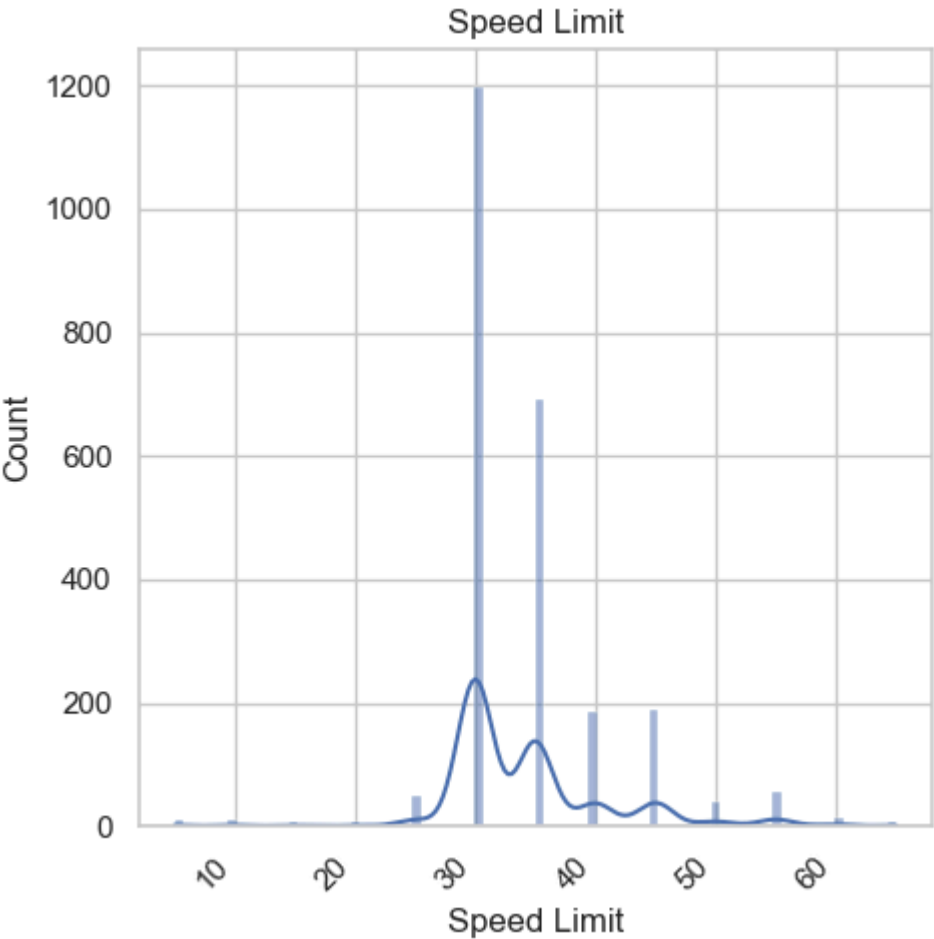

Image Caption

Top factors associated with bike crashes in Austin

According to the comparison between EDA and the three models, among the 12 features, "Traffic Control Type" and "Speed Limit" are the two main causes of bicycle accidents.

Traffic Control Type

Distribution of the number of accidents by traffic control type

Distribution of the number of accidents by speed Limit

Logistic regression model prediction, accuracy 73%

Active School Zone Flag

No	⌄

At Intersection Flag

False	⌄

Construction Zone Flag

No	⌄

Crash Severity

Incapacitating Injury	⌄

Intersection Related

Driveway Access ⌄

Roadway Part

Entrance/On Ramp ⌄

Surface Condition

Dry ⌄

Traffic Control Type

Bike Lane ⌄

Person Helmet

Not Worn ⌄

Crash Total Injury Count

0   —   +

Speed Limit

0   —   +

Predict

Prediction:

$1000 Damage to Any One Person's Property:

Greater chance of property damage less than $1,000