Predicting the Severity of Car Accidents

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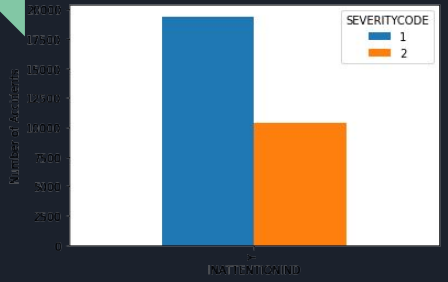
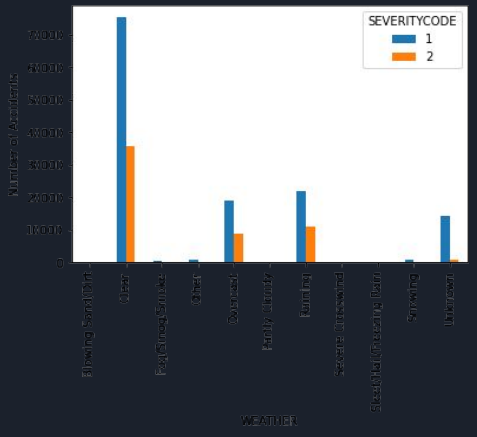
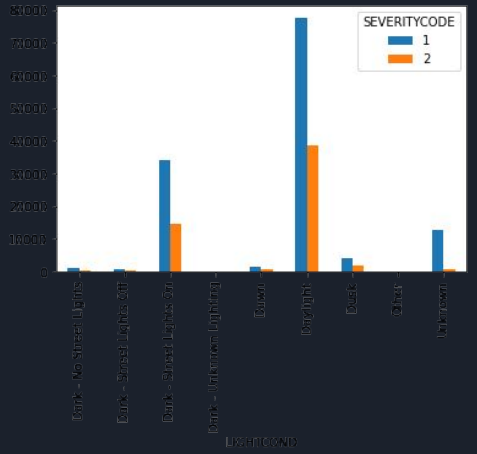
Data Acquisition

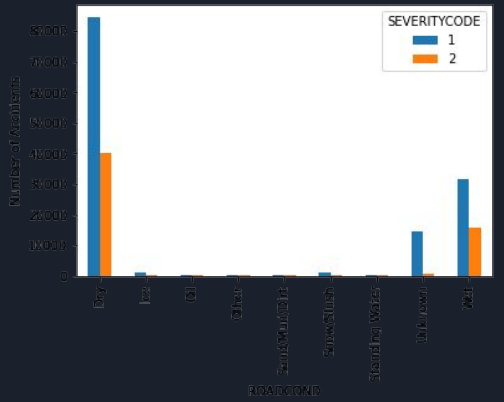
- Seattle’s Department of Transportation
- Over 190,000 recorded accident data
- Includes environmental and behavioral conditions

Data Exploration









Machine Learning Model

- Classifier: Logistic Regression
  - Provides probability of achieving binary state
  - Predicts binary state

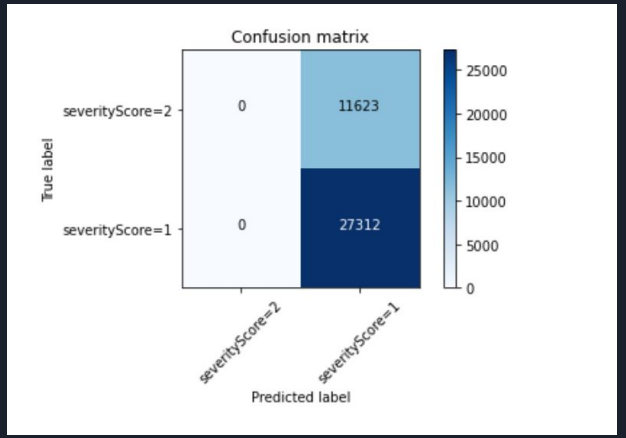
Results

```
from sklearn.metrics import jaccard_score
jaccard_score(y_test, yhat)
```

```
0.701476820341595
```

```
from sklearn.metrics import log_loss
log_loss(y_test, yhat_prob)
```

```
0.6931471805599453
```



Conclusion

The machine learning model needs more development to accurately and reliably predict the severity and probability of accidents based on environmental and behavioral factors. This model would best be served for informational purposes only and should not be used for life threatening situations.