

The background is a teal color with a subtle, repeating pattern of circuit lines and nodes. A diagonal white line runs from the top-left corner towards the bottom-right, creating a triangular white area in the top-left.

Terry Stops: Predicting Consequences

Outline

- ① Summary
- ② Models Used
- ③ Model Selected
- ④ Next Steps

Summary



A police officer can stop you for looking
"suspicious"

The Terry v. Ohio set that precedent

Can we predict the type of consequence?

Using Seattle's data from Terry Stops, models were created to see if consequences were able to be predicted.

Data Included:

- Officer/Subject Race
- Officer/Subject Gender
- Weapons reported

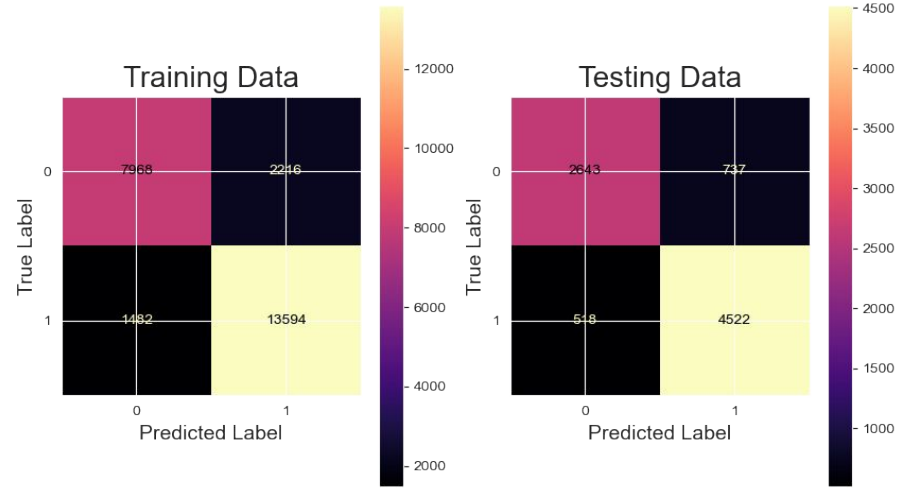
Why is it important?

- Knowing if its possible to predict arrests based on the data at hand, can help us identify key factors that contribute to having a major or a minor consequence after a Terry stop.

Model 1

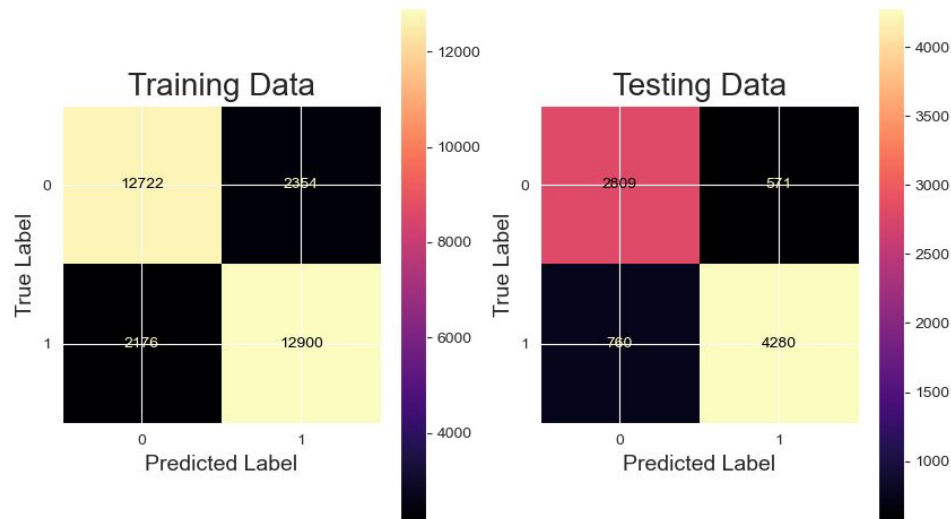
Base Logistic Regression

- F1 Score: .88/.87
- AUC .90



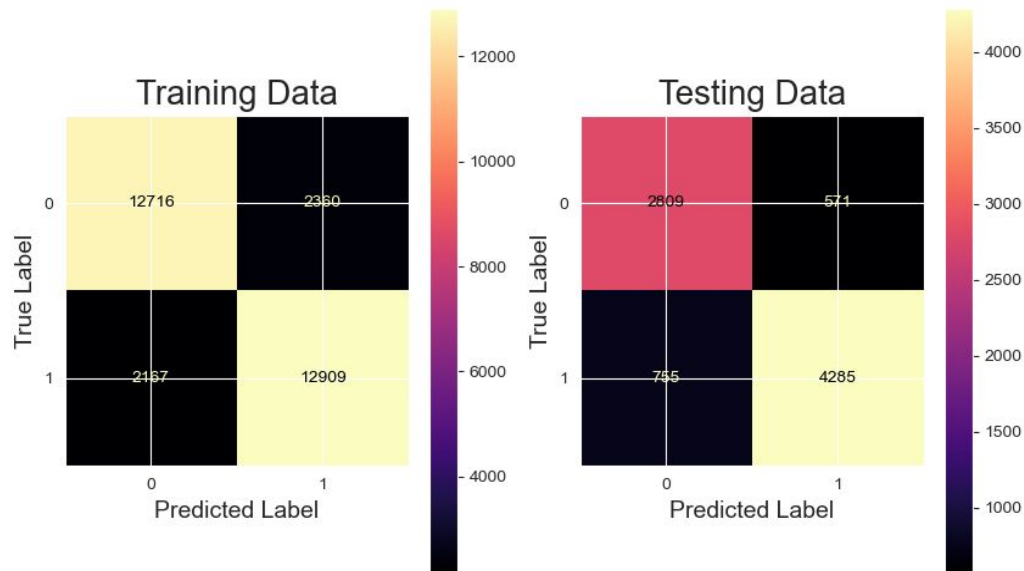
Model 2 - Logistic Regression with synthetic data

- F1 score: .85/.86
- AUC: .90



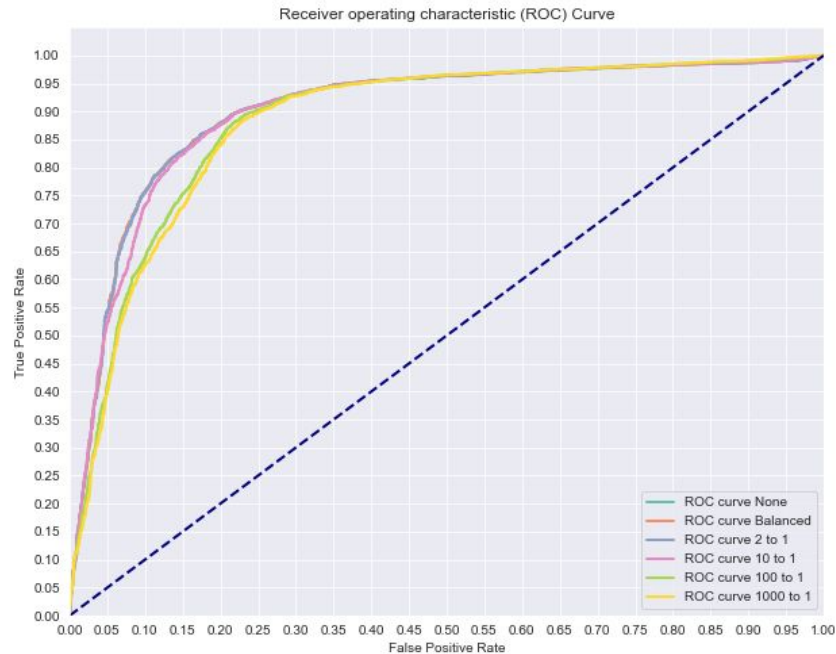
Model 3 - Logistic Regression with L1 penalty

- F1 Score: .85/.86
- AUC score: .90



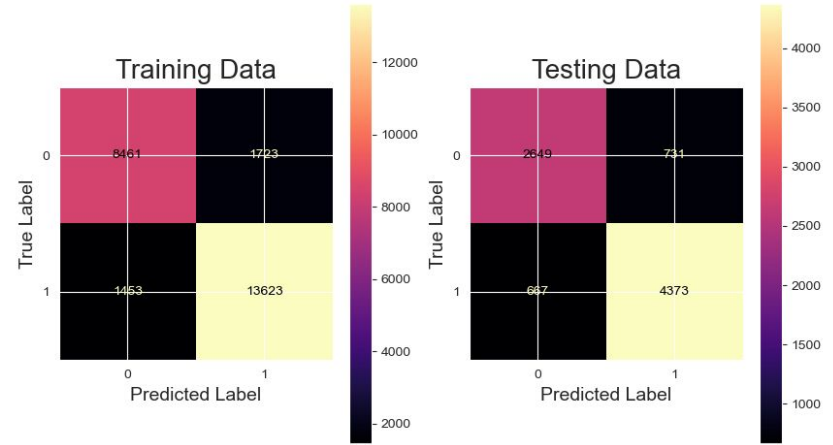
Model 4 - Logistic Regression C-values and Class weights

- F1 Score: .85/.86
- AUC: .90



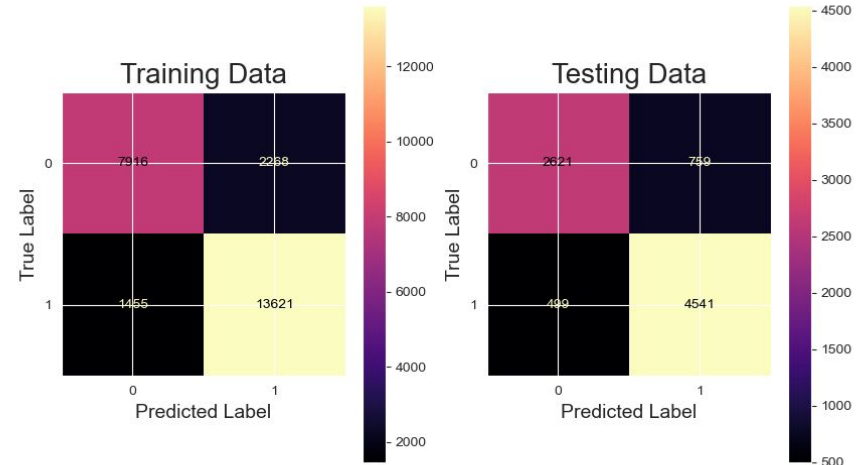
Model 5 - KNN baseline

- F1 Score: .89/.86



Model 6 - KNN with best K

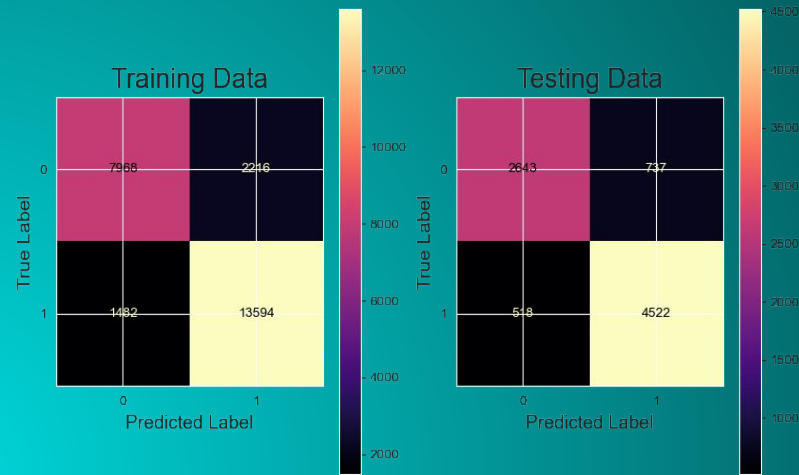
- F1 Score: .87/.87



Selected Model:

Baseline Logistic Regression Model

- Model 1 was the best performing model resource wise and based on evaluation metric.
- Our model predicts major/minor consequences with a 90% accuracy
- Our model accomplishes its objective with proficient metrics



Next steps

- Use other algorithms and tuners to get the best predicting model
- Identify the factors that contribute/determine the consequences that a subject receives

THANKS!

Any questions?

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