Result Summary

# Summary for Models Without Regularization

## Solver=’lbfgs’

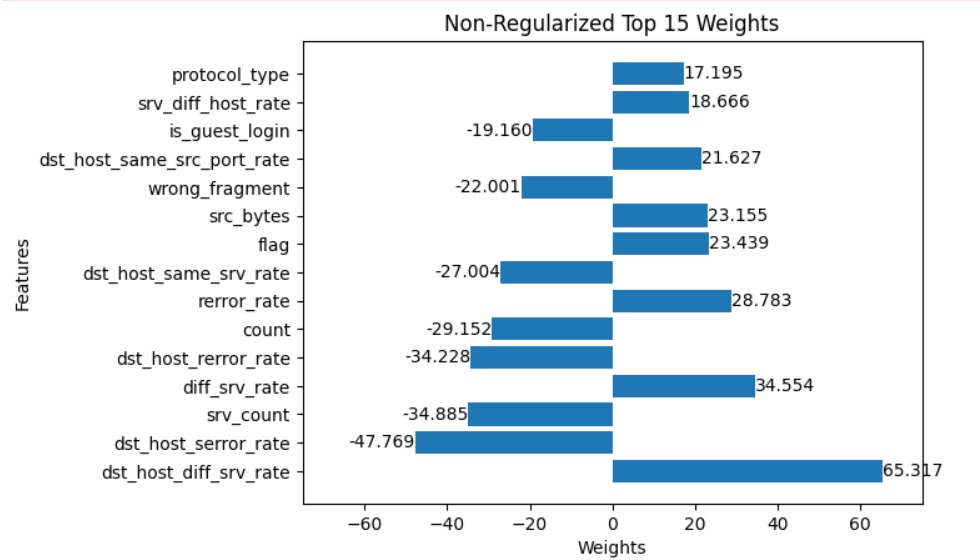
For this implementation, ***majority*** Random Under Sampling was conducting on X and Y and **NOT** on the training data.

* Iterations to converge: 40.
* There was a 0.004285247890386867 difference between training and test predictions.
  + Training Accuracy: 0.796688580
  + Test Accuracy: 0.80097382

**A graph of a graph

Description automatically generated with medium confidence**

* Since the test data has a higher accuracy rate than the training data, this modeling implementation is not overfitting. If it were overfitting, the training data would have performed much better than the test data.



A screenshot of a computer code

Description automatically generated

When looking at the data in kddcup99\_csv.csv, there is very little variance in the features listed above. For example, dst\_host\_diff\_srv\_rate values range from 0.00 to approximately 1. While other features have much larger ranges.

# L1 vs L2

# L2 Comparison

A graph of blue rectangular bars

Description automatically generated

The test data behaves the similarly:

**A graph of a test

Description automatically generated with medium confidence**