Cross Validation Accuracy: 0.60 (+/- 0.06)

Decision Tree

Single Run Prediction Accuracy: 62.4%

True Positive rate: 61.5%

False Positive rate: 36.3%

True Negative rate: 63.7%

False Negative rate: 38.5%

True Positive count: 5589

False Positive count: 2478

True Negative count: 4347

False Negative count: 3497

Total: 15910

dict\_values([9086, 6825])

Cross Validation Accuracy: 0.63 (+/- 0.03)

Neural Network

Single Run Prediction Accuracy: 63.7%

True Positive rate: 65.0%

False Positive rate: 37.4%

True Negative rate: 62.6%

False Negative rate: 35.0%

True Positive count: 4982

False Positive count: 3085

True Negative count: 5159

False Negative count: 2685

Total: 15910

dict\_values([7667, 8244])

Cross Validation Accuracy: 0.59 (+/- 0.04)

Bagging Classifier

Single Run Prediction Accuracy: 60.9%

True Positive rate: 61.0%

False Positive rate: 39.1%

True Negative rate: 60.9%

False Negative rate: 39.0%

True Positive count: 4523

False Positive count: 3321

True Negative count: 5171

False Negative count: 2896

Total: 15910

dict\_values([7419, 8492])

Cross Validation Accuracy: 0.62 (+/- 0.06)

Ada Boost Classifier

Single Run Prediction Accuracy: 63.1%

True Positive rate: 63.5%

False Positive rate: 37.3%

True Negative rate: 62.7%

False Negative rate: 36.5%

True Positive count: 5167

False Positive count: 2900

True Negative count: 4878

False Negative count: 2966

Total: 15910

dict\_values([8133, 7778])

Cross Validation Accuracy: 0.62 (+/- 0.06)

Gradient Boosting Classifier

Single Run Prediction Accuracy: 63.7%

True Positive rate: 64.0%

False Positive rate: 36.5%

True Negative rate: 63.5%

False Negative rate: 36.0%

True Positive count: 5249

False Positive count: 2818

True Negative count: 4894

False Negative count: 2950

Total: 15910

dict\_values([8199, 7712])

Cross Validation Accuracy: 0.61 (+/- 0.07)

Random Forest Classifier

Single Run Prediction Accuracy: 62.9%

True Positive rate: 62.9%

False Positive rate: 37.1%

True Negative rate: 62.9%

False Negative rate: 37.1%

True Positive count: 5283

False Positive count: 2784

True Negative count: 4725

False Negative count: 3119

Total: 15910

dict\_values([8402, 7509])

Cross Validation Accuracy: 0.51 (+/- 0.00)

Support Vector Machine Classifier

Single Run Prediction Accuracy: 50.7%

True Positive rate: 50.7%

False Positive rate: 0.0%

True Negative rate: 0.0%

False Negative rate: 49.3%

True Positive count: 8067

False Positive count: 0

True Negative count: 0

False Negative count: 7844

Total: 15910

dict\_values([15911])

Python 3.7.1 (default, Dec 10 2018, 22:54:23) [MSC v.1915 64 bit (AMD64)]

Type "copyright", "credits" or "license" for more information.

IPython 7.2.0 -- An enhanced Interactive Python.

runfile('C:/Users/Owner/Desktop/Isaac School/CS 450/Project/cs450\_project/cs450\_project.py', wdir='C:/Users/Owner/Desktop/Isaac School/CS 450/Project/cs450\_project')

Cross Validation Accuracy: 0.63 (+/- 0.04)

Neural Network

Single Run Prediction Accuracy: 63.1%

True Positive rate: 61.9%

False Positive rate: 35.5%

True Negative rate: 64.5%

False Negative rate: 38.1%

True Positive count: 5254

False Positive count: 2632

True Negative count: 4790

False Negative count: 3235

Total: 15910

dict\_values([8489, 7422])

Cross Validation Accuracy: 0.61 (+/- 0.05)

Bagging Classifier

Single Run Prediction Accuracy: 60.1%

True Positive rate: 57.1%

False Positive rate: 33.4%

True Negative rate: 66.6%

False Negative rate: 42.9%

True Positive count: 6205

False Positive count: 1681

True Negative count: 3359

False Negative count: 4666

Total: 15910

dict\_values([10871, 5040])

runfile('C:/Users/Owner/Desktop/Isaac School/CS 450/Project/cs450\_project/cs450\_project.py', wdir='C:/Users/Owner/Desktop/Isaac School/CS 450/Project/cs450\_project')

Cross Validation Accuracy: 0.63 (+/- 0.04)

Neural Network

Single Run Prediction Accuracy: 63.6%

True Positive rate: 64.3%

False Positive rate: 36.9%

True Negative rate: 63.1%

False Negative rate: 35.7%

True Positive count: 4397

False Positive count: 3347

True Negative count: 5728

False Negative count: 2439

Total: 15910

dict\_values([6836, 9075])

runfile('C:/Users/Owner/Desktop/Isaac School/CS 450/Project/cs450\_project/cs450\_project.py', wdir='C:/Users/Owner/Desktop/Isaac School/CS 450/Project/cs450\_project')

Cross Validation Accuracy: 0.63 (+/- 0.04)

Neural Network

Single Run Prediction Accuracy: 64.0%

True Positive rate: 63.8%

False Positive rate: 35.8%

True Negative rate: 64.2%

False Negative rate: 36.2%

True Positive count: 5528

False Positive count: 2596

True Negative count: 4656

False Negative count: 3131

Total: 15910

dict\_values([8659, 7252])

runfile('C:/Users/Owner/Desktop/Isaac School/CS 450/Project/cs450\_project/cs450\_project.py', wdir='C:/Users/Owner/Desktop/Isaac School/CS 450/Project/cs450\_project')

Cross Validation Accuracy: 0.62 (+/- 0.04)

Neural Network

Single Run Prediction Accuracy: 63.0%

True Positive rate: 61.5%

False Positive rate: 35.3%

True Negative rate: 64.7%

False Negative rate: 38.5%

True Positive count: 5350

False Positive count: 2541

True Negative count: 4666

False Negative count: 3354

Total: 15910

dict\_values([8704, 7207])

runfile('C:/Users/Owner/Desktop/Isaac School/CS 450/Project/cs450\_project/cs450\_project.py', wdir='C:/Users/Owner/Desktop/Isaac School/CS 450/Project/cs450\_project')

Cross Validation Accuracy: 0.63 (+/- 0.04)

Neural Network

Single Run Prediction Accuracy: 63.1%

True Positive rate: 63.8%

False Positive rate: 37.6%

True Negative rate: 62.4%

False Negative rate: 36.2%

True Positive count: 5069

False Positive count: 2992

True Negative count: 4969

False Negative count: 2881

Total: 15910

dict\_values([7950, 7961])

**Final Four Predictions**

Cross Validation Accuracy: 0.63 (+/- 0.04)

Neural Network Prediction

Single Run Prediction Accuracy: 100.0%

True Positive rate: 100.0%

False Positive rate: 0.0%

True Negative rate: 0.0%

False Negative rate: 0.0%

True Positive count: 2

False Positive count: 0

True Negative count: 0

False Negative count: 0

Total: 1

dict\_values([2])

Virginia – Win / Correct

Michigan St – Win / Incorrect

Auburn – Lose / Correct

Texas Tech – Lose / Incorrect

Championship Prediction

Cross Validation Accuracy: 0.63 (+/- 0.04)

Neural Network Prediction

Single Run Prediction Accuracy: 100.0%

True Positive rate: 100.0%

False Positive rate: 0.0%

True Negative rate: 0.0%

False Negative rate: 0.0%

True Positive count: 1

False Positive count: 0

True Negative count: 0

False Negative count: 0

Total: 0

dict\_values([1])

Virginia – Win

Texas Tech – Lose