

Model	Attempt #1		Optimization Method	Attempt #2		Optimization Method	Attempt #3		Optimization Method	Attempt #4	
	Accuracy (%)	Recall for 1		Accuracy (%)	Recall for 1		Accuracy (%)	Recall for 1		Accuracy (%)	Recall for 1
Unbalanced Data											
<i>SVM</i>	96.20%	0%		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<i>KNN</i>	95.23%	2%	GridSearch Optimization	95.53%	0%	N/A	N/A	N/A	N/A	N/A	N/A
<i>Random Forest Classifier</i>	95.70%	93.00%	the original model: unbalanced and not oversampled	95.10%	93%	Use stratify function to balance data	N/A	N/A	N/A	N/A	N/A
<i>Decision Tree Classifier</i>	91.88%	93.00%	Splitter - using random for best split	91.64%	93.00%	Criterion w Gini & Entropy	91.64%	93%	min_samples_leaf	85.00%	87.00%
Oversampled Data (to balance the data)											
	Accuracy (%)	Recall for 1		Accuracy (%)	Recall for 1		Accuracy (%)	Recall for 1		Accuracy (%)	Recall for 1
<i>SVM</i>	81.50%	82.00%	First attempt: kernel = linear Second attempt: kernel = rbf (default)	86.98%	89.00%	GridSearch Optimization	92.87%	95%	N/A	N/A	N/A
<i>KNN</i>	90.23%	96.00%	GridSearch Optimization	92.81%	94.00%	N/A	N/A	N/A	N/A	N/A	N/A
<i>Random Forest Classifier</i>	98.00%	32.00%	standard scaler	94.26%	96%	stratify + scaler	95.90%	97.00%	stratify + GridSearch Optimization	95.00%	96%
<i>Decision Tree Classifier</i>	48.00%	47.00%	splitter - using random	50.00%	51.00%	criterion-gini - splitter	92.40%	94.00%	min_samples_leaf	44.00%	39.00%