

Decision Tree - w/ Label Encoded + SMOTE Data

Stages		Metrics			
		Accuracy	Precision	Recall	F1 Score
	Research Paper Metrics	81%	35.6%	45.7%	40%
	Base Model	80.9%			
Feature Selection	SelectKBest w/ <i>ANOVA Correlation Coefficient</i> and k=15	78.4%			
	SelectKBest w/ <i>Mutual Information Statistic</i> and k=12	76.8%			
	Forward Selection with k=9	83.9%			
	Forward Selection with k=15	78.0%			
Hyperparameter Tuning	Without Feature Selection				
	GridSearchCV	79.3%			
	RandomSearchCV	83.1%			
	With Feature Selection				
	GridSearchCV	82.7%			
	RandomSearchCV	82.7%			

Best Model	Accuracy	Precision	Recall	F1 Score
Feature Selection with no Hyperparameter Tuning	84.4%	83.0%	86.8%	84.8%