

Table 1: Optimal tuning parameters for each algorithm

Model	Penalty	TreeDepth	Neighbors	Activation	Degree
Logistic Regression	0.01	-	-	-	-
Decision Tree	-	3	-	-	-
KNN	-	-	5	-	-
Neural Network	0.001	-	-	relu	-
SVM	1	-	-	-	2

Table 2: Out-of-sample performance metrics for each algorithm

model	.metric	.estimate	.config
Logistic Regression	accuracy	0.84	
Logistic Regression	roc_auc	0.91	
Decision Tree	accuracy	0.80	
Decision Tree	roc_auc	0.87	
KNN	accuracy	0.82	
KNN	roc_auc	0.89	
Neural Network	accuracy	0.85	
Neural Network	roc_auc	0.92	
SVM	accuracy	0.83	
SVM	roc_auc	0.90	

- 1 Based on the out-of-sample performance metrics, we can make the following comparisons among the algorithms: the Neural Network algorithm has the best out-of-sample performance in terms of accuracy and ROC AUC score, followed by Logistic Regression, SVM, KNN, and finally Decision Tree.