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CIS 335

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March 30, 2022

Assignment 3

1. Bagging with z-scored values and no features selected gives the best performance.
2. Recall is the most important because it has the highest value.

Name	Scaling Feature	selector	parameter	Recall	Precision	Accuracy	F1score
Adaboost	none	none	n_estimators= 10	0.762	0.619	0.676	0.733
Adaboost	z-score	none	n_estimators= 10	0.762	0.619	0.676	0.733
Adaboost	z-score	ffs	n_estimators= 10	0.757	0.582	0.683	0.722
Adaboost	none	ffs	n_estimators= 10	0.751	0.586	0.663	0.718
Adaboost	z-score	rfe	n_estimators= 10	0.76	0.59	0.685	0.727
Adaboost	none	rfe	n_estimators= 10	0.691	0.414	0.584	0.632
Random Forest	none	none	n_estimators= 10	0.759	0.5	0.731	0.71
Random Forest	z-score	none	n_estimators= 10	0.759	0.5	0.731	0.71
Random Forest	z-score	ffs	n_estimators= 10	0.76	0.552	0.701	0.721
Random Forest	none	ffs	n_estimators= 10	0.755	0.511	0.707	0.708
Random Forest	z-score	rfe	n_estimators= 10	0.754	0.526	0.7	0.71
Random Forest	none	rfe	n_estimators= 10	0.69	0.302	0.616	0.597
Naive Bayes	none	none	n_estimators= 100	0.751	0.586	0.662	0.718
Naive Bayes	z-score	none	n_estimators= 100	0.751	0.586	0.662	0.718
Naive Bayes	z-score	ffs	n_estimators= 100	0.766	0.564	0.707	0.728
Naive Bayes	none	ffs	n_estimators= 100	0.768	0.541	0.727	0.726
Naive Bayes	z-score	rfe	n_estimators= 100	0.757	0.556	0.691	0.718

Naive Bayes	none	rfe	n_estimators= 100	0.686	0.351	0.583	0.61
Bagging	none	none	n_estimators= 10	0.758	0.474	0.747	0.703
Bagging	z-score	none	n_estimators= 10	0.78	0.552	0.755	0.738
Bagging	z-score	ffs	n_estimators= 10	0.76	0.478	0.751	0.707
Bagging	none	ffs	n_estimators= 10	0.747	0.426	0.746	0.683
Bagging	z-score	rfe	n_estimators= 10	0.753	0.452	0.742	0.694
Bagging	none	rfe	n_estimators= 10	0.673	0.104	0.715	0.488
Decision Tree	none	none	n_estimators= 100	0.708	0.582	0.592	0.695
Decision Tree	z-score	none	n_estimators= 100	0.71	0.586	0.587	0.687
Decision Tree	z-score	ffs	n_estimators= 100	0.689	0.594	0.566	0.669
Decision Tree	none	ffs	n_estimators= 100	0.674	0.564	0.535	0.642
Decision Tree	z-score	rfe	n_estimators= 100	0.684	0.56	0.561	0.644
Decision Tree	none	rfe	n_estimators= 100	0.638	0.492	0.469	0.597