

Decision Tree Implementation

Telco-customer-churn DATASET

Performance measure	Training	Test
Accuracy	98.88198757763975	73.9346590909091
True positive rate (sensitivity, recall, hit rate)	0.984553391537945	0.5026315789473684
True negative rate (specificity)	0.9903521466473709	0.8268482490272373
Positive predictive value (precision)	0.9734395750332006	0.5176151761517616
False discovery rate	0.02656042496679947	0.4823848238482385
F1 score	0.9789649415692822	0.5100133511348465

Adult DATASET

Performance measure	Training	Test
Accuracy	99.86486901507939	81.0392482034273
True positive rate (sensitivity, recall, hit rate)	0.9977043744420354	0.6066042641705668
True negative rate (specificity)	0.998948220064725	0.8734217933252915
Positive predictive value (precision)	0.9966874761116066	0.5971333503967239
False discovery rate	0.003312523888393426	0.4028666496032762
F1 score	0.9971956660293181	0.6018315490777764

Creditcardfraud

DATASET

Performance measure	Training	Test
Accuracy	100.0	99.91397773954566
True positive rate (sensitivity, recall, hit rate)	1.0	0.6933333333333334
True negative rate (specificity)	1.0	0.9995429535746304
Positive predictive value (precision)	1.0	0.6666666666666666
False discovery rate	0.0	0.3333333333333333
F1 score	1.0	0.6797385620915033

Accuracy of Adaboost Implementation

Telco-customer-churn DATASET

Number of boosting rounds	Training	Test
5	98.95297249334516	73.1534090909091
10	99.02395740905058	73.7215909090909
15	99.11268855368235	74.57386363636364
20	99.11268855368235	74.57386363636364

Adult DATASET

Number of boosting rounds	Training	Test
5	99.90479407880593	80.22848719366132
10	99.90479407880593	80.56016215220195
15	99.90786523755413	80.52330937903078
20	99.90786523755413	80.56016215220195

Creditcardfraud

DATASET

Number of boosting rounds	Training	Test
5	100.0	99.24371797999513
10	100.0	99.46328372773847
15	100.0	99.41449133935106
20	100.0	99.41449133935106