

**Table 1** Results without dimensionality reduction

Model	Accuracy (Mean)	Accuracy (Std)	Precision (Mean)	Precision (Std)	Recall (Mean)	Recall (Std)	F1-score (Mean)	F1-score (Std)	Execution time (ms)
KNN (k=1)	0.98	0.0007	0.98	0.0007	0.98	0.0007	0.98	0.0007	114
KNN (k=3)	0.98	0.0003	0.98	0.0003	0.98	0.0003	0.98	0.0003	125
KNN (k=5)	0.98	0.0009	0.98	0.0009	0.98	0.0009	0.98	0.0009	155
DT (Entropy)	0.89	0.001	0.89	0.001	0.89	0.001	0.89	0.001	5
DT (Gini)	0.89	0.015	0.89	0.015	0.89	0.015	0.89	0.015	5
NB	0.77	0.041	0.77	0.041	0.77	0.041	0.77	0.041	10
SVM (RBF)	0.98	0.001	0.98	0.001	0.98	0.001	0.98	0.001	135
SVM (Poly)	0.98	0.001	0.98	0.001	0.98	0.001	0.98	0.001	44
SVM (Sigmoid)	0.84	0.001	0.84	0.001	0.84	0.001	0.84	0.001	207
Ensemble	0.97	0.002	0.97	0.002	0.97	0.002	0.97	0.002	145

**Table 2** Results with dimensionality reduction (PCA)

Model	Accuracy (Mean)	Accuracy (Std)	Precision (Mean)	Precision (Std)	Recall (Mean)	Recall (Std)	F1-score (Mean)	F1-score (Std)	Execution time (ms)
KNN (k=1)	0.98	0.0007	0.98	0.0007	0.98	0.0007	0.98	0.0007	114
KNN (k=3)	0.98	0.0003	0.98	0.0003	0.98	0.0003	0.98	0.0003	125
KNN (k=5)	0.98	0.0009	0.98	0.0009	0.98	0.0009	0.98	0.0009	155
DT (Entropy)	0.89	0.006	0.89	0.006	0.89	0.006	0.89	0.006	5
DT (Gini)	0.89	0.014	0.89	0.014	0.89	0.014	0.89	0.014	5
NB	0.77	0.041	0.77	0.041	0.77	0.041	0.77	0.041	10
SVM (RBF)	0.98	0.001	0.98	0.001	0.98	0.001	0.98	0.001	135
SVM (Poly)	0.98	0.001	0.98	0.001	0.98	0.001	0.98	0.001	44
SVM (Sigmoid)	0.84	0.001	0.84	0.001	0.84	0.001	0.84	0.001	207
Ensemble	0.97	0.0006	0.97	0.0006	0.97	0.0006	0.97	0.0006	145

**Table 3** Results with dimensionality reduction (LDA)

Model	Accuracy (Mean)	Accuracy (Std)	Precision (Mean)	Precision (Std)	Recall (Mean)	Recall (Std)	F1-score (Mean)	F1-score (Std)	Execution time (ms)
KNN (k=1)	0.98	0.0007	0.98	0.0007	0.98	0.0007	0.98	0.0007	114
KNN (k=3)	0.98	0.0003	0.98	0.0003	0.98	0.0003	0.98	0.0003	125
KNN (k=5)	0.98	0.0009	0.98	0.0009	0.98	0.0009	0.98	0.0009	155
DT (Entropy)	0.89	0.004	0.89	0.004	0.89	0.004	0.89	0.004	5
DT (Gini)	0.89	0.010	0.89	0.010	0.89	0.010	0.89	0.010	5
NB	0.77	0.041	0.77	0.041	0.77	0.041	0.77	0.041	10
SVM (RBF)	0.98	0.001	0.98	0.001	0.98	0.001	0.98	0.001	135
SVM (Poly)	0.98	0.001	0.98	0.001	0.98	0.001	0.98	0.001	44
SVM (Sigmoid)	0.84	0.001	0.84	0.001	0.84	0.001	0.84	0.001	207
Ensemble	0.97	0.0006	0.97	0.0006	0.97	0.0006	0.97	0.0006	145