

ML Model Performance Results Table

Model	Embedding	Accuracy (%)	Precision (%)	Recall (%)	F1 Score (%)
SVM	MPNet	89.93	88.60	89.93	88.65
Logistic Regression	MPNet	89.76	88.97	89.76	89.27
LightGBM	MPNet	89.76	89.23	89.76	88.43
SVM	all-MiniLM-L6	89.59	88.82	89.59	88.36
XGBoost	MPNet	89.25	88.00	89.25	87.66
LightGBM	all-MiniLM-L6	88.91	87.86	88.91	87.17
Logistic Regression	all-MiniLM-L6	88.91	88.42	88.91	88.54
Gradient Boosting	MPNet	88.74	87.76	88.74	87.28
CatBoost	MPNet	88.57	87.83	88.57	86.11
Random Forest	MPNet	88.05	87.81	88.05	85.22
CatBoost	all-MiniLM-L6	88.05	87.97	88.05	85.23
Gradient Boosting	all-MiniLM-L6	87.03	86.34	87.03	85.23
XGBoost	all-MiniLM-L6	86.86	86.04	86.86	85.21
AdaBoost	MPNet	86.69	82.69	86.69	83.29
Random Forest	all-MiniLM-L6	86.69	87.16	86.69	83.93
AdaBoost	all-MiniLM-L6	84.47	83.46	84.47	81.57
Naive Bayes	MPNet	82.25	82.73	82.25	81.98
Decision Tree	MPNet	80.38	80.12	80.38	80.21
Naive Bayes	all-MiniLM-L6	77.82	72.92	77.82	74.23
Decision Tree	all-MiniLM-L6	76.45	76.64	76.45	76.35