

HAPT DATASET REPORT

MODEL SELECTION RESULTS:

	MODEL SELECTION TIME	MODEL NAME	ACCURACY
	2496.2741	LGBM	0.98

K VALUE SELECTION RESULTS:

PCA RESULTS

Feature Selection	K Value	K Computation Time	PCA Train Time	PCA Test Time
Shap	115	7.6789	8.9290	0.2102
Fisher Count	191	0.1374	8.9813	0.1642
Chi2	241	0.0938	11.0640	0.1604
RelieF Count	154	221.7497	6.7360	0.1551
Info Count	233	22.5691	5.8011	0.0902

MODEL PERFORMANCE REPORT AFTER PCA

Feature Selection	Accuracy	Precision	Recall	F1-score	Area under ROC
Shap	0.9425	0.8208	0.7876	0.8115	0.9962
Fisher Score	0.9619	0.8362	0.7968	0.9624	0.9917
Chi2_Test	0.9392	0.7883	0.7628	0.7721	0.9818
RelieF Count	0.9476	0.8205	0.7788	0.7946	0.9972
Info Gain	0.2740	0.3368	0.1636	0.1484	0.5503

ICA RESULTS:

Feature Selection	K Value	ICA Train Time	ICA Test Time
Shap	115	21.5527	0.2332
Fisher Count	191	25.0560	0.2012
Chi2	241	32.0174	0.20789
RelieF Count	154	21.8939	0.2381
Info Count	233	33.6189	0.2184

MODEL PERFORMANCE REPORT AFTER ICA:

Feature Selection	Accuracy	Precision	Recall	F1-score	Area under ROC
Shap	0.9399	0.8536	0.8106	0.8302	0.9974
Fisher Score	0.9440	0.7904	0.7518	0.7669	0.9967
Chi2_Test	0.9469	0.8230	0.7957	0.8059	0.9914
RelieF Count	0.9458	0.8510	0.7953	0.8172	0.9984
Info Gain	0.9447	0.8328	0.8197	0.8211	0.9957