

Results for classification assisted with Kmeans for Model 2

get_dummies categorical data.

- Without K-means

Models	Accuracy	CV Accuracy	Precision	Recall	F1
Logistic Regression	0.929	0.833	0.833	0.854	0.843
Decision Tree	0.960	0.845	0.872	0.895	0.882
Neural Network (MLP)	0.952	0.898	0.866	0.914	0.888

- k=3

Models	Accuracy	CV Accuracy	Precision	Recall	F1
Logistic Regression	0.925	0.847	0.823	0.831	0.827
Decision Tree	0.963	0.845	0.894	0.918	0.904
Neural Network (MLP)	0.956	0.862	0.894	0.928	0.909

- k=4 (best)

Models	Accuracy	CV Accuracy	Precision	Recall	F1
Logistic Regression	0.931	0.847	0.836	0.865	0.849
Decision Tree	0.973	0.830	0.905	0.943	0.922
Neural Network (MLP)	0.960	0.858	0.887	0.924	0.903

- k=8

Models	Accuracy	CV Accuracy	Precision	Recall	F1
Logistic Regression	0.931	0.829	0.828	0.829	0.827
Decision Tree	0.963	0.861	0.906	0.928	0.915
Neural Network (MLP)	0.963	0.862	0.896	0.923	0.908

- k=9

Models	Accuracy	CV Accuracy	Precision	Recall	F1
Logistic Regression	0.921	0.842	0.821	0.827	0.824
Decision Tree	0.963	0.837	0.894	0.918	0.904
Neural Network (MLP)	0.960	0.869	0.891	0.916	0.902