

# Market Value Prediction:

In the Market Value Prediction problem a feature selection and multiple model test is used, feature selection is done using mutual information. Thus four batches of selected features are taken and multiple regression models are applied on each of the batches. First batch based on co-relation with co-relations  $> 0.3$ , second batch with co-relation greater than equal to 0.4, third batch with mutual information greater than equal to 0.05 and fourth batch with mutual information greater than 0.06. Batch  $i$  is represented as features  $i$ . Since the standard deviation curves are majorly non-gaussian, standard scaler is used for feature scaling. RandomForestRegressor, DecisionTreeRegressor, SVR, KNeighborsRegressor, and Artificial Neural Networks (ANN) models are used on each of the batches. Comparison is made based on Mean Squared Error.

	SVR	Random Forest	KNN Regressor	XGB-Regressor	Decision Tree Regressor	Linear Regressor	ANN
Features1	356.953	171.115	200.498	188.401	329.860	128.036	185.730
Features2	324.537	173.995	195.497	205.095	317.014	317.014	191.620
Features3	363.244	142.057	195.606	152.570	329.773	116.245	186.511
Features4	356.695	147.360	182.428	154.736	301.697	124.326	187.512