

To find the following machine learning regression method using r^2 value

1. MULTIPLE LINEAR REGRESSION:

R^2 value = 0.935

2. SUPPORT VECTOR MACHINE:

SL. NO	HYPER PARAMETER	LINEAR (r value)	RBF (NON LINEAR) (r value)	POLY (r value)	SIGMOID (r value)
1	C10	0.039644947	-0.056807593	0.053667205	-0.054719583
2	C100	0.106468196	-0.050726023	0.019802139	-0.030453515
3	C500	0.592897727	-0.024323348	0.114684807	0.070572145
4	C1000	0.780283988	0.006768344	0.266163709	0.18506862
5	C2000	0.876772169	0.067515543	0.481002816	0.397065287
6	C3000	0.895674469	0.123227566	0.63700642	0.591363021

SVM Regression best model from Linear and Hyper parameter (C=3000)

R^2 value = 0.895

3. DECISION TREE:

SL. NO	CRITERION	SPLITTER	R VALUE
1	squared_error	best	0.908316699
2	squared_error	random	0.937352199
3	friedman_mse	best	0.926004364
4	friedman_mse	random	0.861108577
5	absolute_error	best	0.95664675
6	absolute_error	random	0.9288036
7	poisson	best	0.9203655
8	poisson	random	0.710068909

Decision Tree Regression best model from CRITERION “absolute_error”
and SPLITTER “best” R^2 value = 0.956

4. RANDOM FOREST:

SL.No	n_estimators	Random_State	R Value
1	1	0	0.964514891
2	10	0	0.925277279
3	50	0	0.944633639
4	100	0	0.946004355

Random Forest Regression best model **R^2 value = 0.964**