To find the best model of machine learning Regression method using r2 score

1.MULTIPLE LINEAR REGRESSION – r2 value is 0.9358680970

2.SUPPORT VECTOR MACHINE-

S.NO	HYPER PARA-METER	LINEAR (r value)	RBF (Non-Linear) (r value)	POLY (r value)	SIGMOID (r value)
1	C=10	-0.039644	-0.056807	-0.053667	-0.054719
2	C=100	0.106468	-0.050726	-0.019802	-0.030453
3	C=500	0.592897	-0.024323	0.114684	0.070572
4	C=1000	0.780283	0.006768	0.266163	0.185068
5	C=2000	0.876772	0.067515	0.481002	0.397065
6	C=3000	0.895674	0.123227	0.637006	0.591363

SVM Regression use R2 value (linear and hyperparameter-C=3000) is **0.895674**

3.DECISION TREE-

S.NO	CRITERION	MAX FEATURES	SPLITTER	R VALUE
1	Squared error	Auto	Best	0.89963
2	Squared error	Auto	random	0.92122
3	Squared error	Sqrt	Best	0.55739
4	Squared error	Sqrt	random	0.76113
5	Squared error	Log2	Best	0.52032
6	Squared error	Log2	random	0.56916
7	Absolute error	Auto	Best	0.94984
8	Absolute error	Auto	random	0.88207
9	Absolute error	Sqrt	Best	0.84733
10	Absolute error	Sqrt	random	-0.00557
11	Absolute error	Log2	Best	0.54373
12	Absolute error	Log2	random	0.75465
13	Friedman_mse	Auto	Best	0.90301
14	Friedman_mse	Auto	random	0.75953
15	Friedman_mse	Sqrt	Best	0.64627
16	Friedman_mse	Sqrt	random	-1.79415
17	Friedman_mse	Log2	Best	0.91051
18	Friedman_mse	Log2	random	0.16541

Hypertuning parameters – criterion=mae , max_features=auto, splitter=best has the highest r score – **0.94984**