

THE BEST R_SCORE VALUE

SIMPLE LINEAR REGRESSOR = 0.7894

MULTI LINEAR REGRESSOR = 0.78651

DECISION TREE REGRESSOR= 0.6792

S.NO	CRITERION	SPLITTER	MAX_FEATURES	R_VALUE
1	friedman_mse	random	auto	0.713
2	friedman_mse	random	sqrt	0.706
3	friedman_mse	random	log2	0.675
4	friedman_mse	best	auto	0.699
5	friedman_mse	best	sqrt	0.717
6	friedman_mse	best	log2	0.758
7	absolute_error	best	Auto	0.681
8	absolute_error	best	sqrt	0.782
9	absolute_error	best	log2	0.758
10	absolute_error	random	auto	0.740
11	absolute_error	random	sqrt	0.749
12	absolute_error	random	log2	0.672
13	poisson	random	auto	0.709
14	poisson	random	sqrt	0.668
15	poisson	random	log2	0.591
16	poisson	best	auto	0.702
17	poisson	best	sqrt	0.666
18	poisson	best	log2	0.748

THE BEST DECISION TREE R SCORE VALUE = 0.782

SUPPORT VECTOR MACHIN r_sore

S.NO	PARAMETER	LINEAR	RBF	POLY	SIGMOID
1	C=0.1	-0.155	-0.098	-0.097	-0.0987
2	C=1	-0.148	-0.098	-0.079	-0.0987
3	C=10	-0.040	-0.096	-0.120	-0.099
4	C=20	0.0718	-0.095	-0.126	-0.100
5	C=100	0.521	-0.088	-0.131	-0.124
6	C=500	0.613	-0.076	-0.116	-0.419
7	C=1000	0.618	-0.067	-0.092	-1.521
8	C=2000	0.625	-0.028	-0.042	-5.092
9	C=3000	0.666	0.012	0.0062	-10.94

10	C=4000	0.680	0.053	0.0534	-18.92
11	C=5000	0.706	0.0920	0.0995	-28.80

Random forest

R_score= 0.857

S.no	criterion	max_features	n_estimators	R_value
1	friedman_mse	Auto	10	0.851
2	friedman_mse	Auto	100	0.859
3	friedman_mse	Sqrt	10	0.865
4	friedman_mse	Sqrt	100	0.869
5	friedman_mse	Log2	10	0.858
6	friedman_mse	Log2	100	0.870
7	poisson	Auto	10	0.838
8	Poisson	Auto	100	0.860
9	Poisson	Sqrt	10	0.854
10	poisson	Sqrt	100	0.872
11	Poisson	Log2	10	0.842
12	poisson	Log2	100	0.870

The best model is random forest

