

TO FIND BEST MODEL FROM R2 SCORE WITH HYPER PARAMETERS

1.MULTIPLE LINEAR REGRESSION

R2 Score

0.93586

2.SUPPORT VECTOR MACHINE- REG

S.NO	HYPER.PARAMETER	LINEAR (R2)	RBF (R2)	POLY (R2)	SIGMOID (R2)
1	C =1.0	-0.055	-0.057	-0.057	-0.057
2	C=10	-0.039	-0.056	-0.053	-0.054
3	C=100	0.1	-0.5	-0.019	-0.03
4	C=1000	0.78	0.006	0.26	0.18
5	C=2000	0.87	0.067	0.48	0.39
6	C=3000	0.895	0.12	0.63	0.59
7	C=4000	0.897	0.17	0.73	0.62

SVMR

R2 Score

0.89

(linear R2,C=4000)

3.DECISION TREE-REG

S.NO	CRITERION	MAX-FEATURES	SPLITTER	R2 SCORE
1	squared_error	auto	best	0.89
2	squared_error	sqrt	best	0.78
3	squared_error	log2	best	0.76
4	squared_error	auto	random	0.75
5	squared_error	sqrt	random	0.77
6	squared_error	log2	random	0.75
7	friedman_mse	auto	best	0.94
8	friedman_mse	sqrt	best	0.72
9	friedman_mse	log2	best	0.76
10	friedman_mse	auto	random	0.93
11	friedman_mse	sqrt	random	0.85
12	friedman_mse	log2	random	-0.87
13	absolute_error	auto	best	0.96
14	absolute_error	sqrt	best	0.82
15	absolute_error	log2	best	0.64
16	absolute_error	auto	random	0.91
17	absolute_error	sqrt	random	0.65
18	absolute_error	log2	random	-0.26
19	poisson	auto	best	0.73
20	poisson	sqrt	best	0.24
21	poisson	log2	best	0.36
22	poisson	auto	random	0.51
23	poisson	sqrt	random	0.71
24	poisson	log2	random	0.63

DTR

R2 Score

0.96

(Criterion=absolute_error,max-feature=auto,splitter=best)