

To find the following machine learning regression method used in r2 value

1. SUPPORT VECTOR MACHINE:

S.no	HYPER PARAMETER	<i>linear</i> (r value)	<i>rbf</i> (NON LINEAR ) (r value)	<i>poly</i> (R value)	<i>sigmoid</i> (r value)
1	C10	-0.0396	-0.0568	-0.0536	-0.0547
2	C100	0.1064	-0.0507	-0.0198	-0.0304
3	C500	0.5928	-0.0243	0.1146	0.0705
4	C1000	0.7802	0.0067	0.2661	0.1850
5	C2000	0.8767	0.0675	0.4810	0.3970
6	C3000	0.8956	0.1232	0.6370	0.5913

The SVM regression use R2 value (linear and hyperparameter (C3000))= 0.8956

## 2. DECISION TREE:

S.NO	CRITERION	MAX_FEATURES	SPLITTER	R VALUE
1	squared_error	sqrt	best	0.3415
2	squared_error	sqrt	random	-0.4066
3	squared_error	log2	best	0.7722
4	squared_error	log2	random	0.7330
5	friedman_mse	sqrt	best	0.4868
6	friedman_mse	sqrt	random	0.2849
7	friedman_mse	log2	best	0.8318
8	friedman_mse	log2	random	0.9045
9	absolute_error	sqrt	best	0.9412
10	absolute_error	sqrt	random	0.5801
11	absolute_error	log2	best	-0.0339
12	absolute_error	log2	random	0.9277
13	poisson	sqrt	best	0.7860
14	poisson	sqrt	random	0.3920
15	poisson	log2	best	-0.4276
16	poisson	log2	random	-0.0408

The DECISION TREE use R2 value (hyperparameter (absolute\_error, sqrt, best))= 0.9412

