

To find following the Machine Learning Regression method using in r^2 value

1. Multiple Linear Regression

R^2 value = 0.935868097

2. Support Vector Machine

SL. No	Hyper Parameter	Linear	RBF (non-linear)-r value	POLY (r value)	SIGMOID (r value)
1	C=.1	-0.057306	-0.057479	-0.057448	-0.0574585
2	C=10	-0.039644	-0.056807	-0.0536672	-0.0547195
3	C=100	0.10646819	-0.05072	-0.0198021	-0.0304535
4	C=500	0.5928977	-0.024323	0.1146848	0.0705721
5	C=1000	0.7802839	0.006768	0.2661637	0.185068
6	C=2000	0.8767721	0.0675155	0.4810028	0.397065
7	C=3000	0.895674	0.1232275	0.637006	0.591363
8	C=5000	0.9003762	0.212428	0.79365554	0.730656

The SVM use R^2 value (Linear) and hyper parameter (C5000) = 0.9003762

3.Decision Tree

SL. NO	CRITERION	MAX FEATURES	SPLITTER	R Value
1	<i>squared_error</i>	None	auto	0.924210237
2	<i>squared_error</i>	None	best	0.8980083
3	<i>squared_error</i>	None	random	0.9295193
4	<i>squared_error</i>	sqrt	auto	-0.0111012
5	<i>squared_error</i>	sqrt	best	0.77265172
6	<i>squared_error</i>	sqrt	random	-0.4907530
7	<i>squared_error</i>	Log2	auto	0.409848
8	<i>squared_error</i>	Log2	best	0.841686
9	<i>squared_error</i>	Log2	random	0.594036
10	<i>friedman_mse</i>	None	auto	0.922863755
11	<i>friedman_mse</i>	None	best	0.9422698
12	<i>friedman_mse</i>	None	random	0.9025651
13	<i>friedman_mse</i>	sqrt	auto	0.730420
14	<i>friedman_mse</i>	sqrt	best	0.551438223
15	<i>friedman_mse</i>	sqrt	random	0.575289829
13	<i>friedman_mse</i>	Log2	auto	0.44118166
14	<i>friedman_mse</i>	Log2	best	0.75228770
15	<i>friedman_mse</i>	Log2	random	-0.2203162
16	<i>absolute_error</i>	None	auto	0.9218634
17	<i>absolute_error</i>	None	best	0.96780
18	<i>absolute_error</i>	None	random	0.9196897
19	<i>absolute_error</i>	sqrt	auto	0.7338707
20	<i>absolute_error</i>	sqrt	best	0.63656
21	<i>absolute_error</i>	sqrt	random	-0.376543
22	<i>absolute_error</i>	Log2	auto	0.903078
23	<i>absolute_error</i>	Log2	best	0.668032
24	<i>absolute_error</i>	Log2	random	-0.623756
25	<i>poisson</i>	None	auto	0.937988

26	<i>poisson</i>	None	best	0.916947
27	<i>poisson</i>	None	random	0.8741552
28	<i>poisson</i>	sqrt	auto	0.4867574
29	<i>poisson</i>	sqrt	best	0.7618281
30	<i>poisson</i>	sqrt	random	0.6464782
31	<i>poisson</i>	Log2	auto	0.6809524
32	<i>poisson</i>	Log2	Best	0.658725
3	<i>poisson</i>	Log2	Random	0.143063

The Decision Tree Regression use R^2 value(*absolute_error*, best)= 0.96780