

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

1. Multiple Linear Regression (R2 value): 0.93586

2. Support Vector Machine

S.NO	HYPER PARAMETER	LINEAR	RBF	POLY	SIGMOID
1.	C=10	-0.03964	-0.05680	-0.05366	-0.05471
2.	C=100	0.10646	-0.05072	-0.01980	-0.03045
3.	C=500	0.59289	-0.02432	0.11468	0.07057
4.	C=1000	0.78028	0.00676	0.26616	0.26616
5.	C=2000	0.87677	0.06751	0.48100	0.39706
6	C=3000	0.89567	0.12322	0.63700	0.59136

The svm regression (r2 value is 0.89567, hyper parameter=3000, linear)

3. Decision Tree

S.NO	Criterion	Splitter	Max feature	R value
1.	Squared Error	best	None	0.92261
2	Squared Error	best	Sqrt	0.85594
3	Squared Error	best	Log2	0.52954
4	Squared Error	random	None	0.87017
5	Squared Error	random	Sqrt	0.04592
6	Squared Error	random	Log2	0.37280
7	Friedman mse	best	None	0.91481
8	Friedman mse	best	Sqrt	0.76699
9	Friedman mse	best	Log2	0.76919
10	Friedman mse	random	None	0.90770
12	Friedman mse	random	sqrt	0.70485
13	Friedman mse	random	Log2	-0.13960
14	Absolute Error	best	None	0.95337

15	Absolute Error	best	sqrt	<b>0.71378</b>
16	Absolute Error	best	Log2	<b>0.57123</b>
17	Absolute Error	random	None	<b>0.92084</b>
18	Absolute Error	random	sqrt	<b>-0.40680</b>
19	Absolute Error	random	Log2	<b>0.70456</b>
20	Poisson	best	None	<b>0.92544</b>
21	Poisson	best	Sqrt	<b>0.12897</b>
22	Poisson	best	Log2	<b>0.58682</b>
23	Poisson	random	None	<b>0.78785</b>
24	Poisson	random	Sqrt	<b>-0.08203</b>
25	Poisson	random	Log2	<b>-0.69373</b>

The Decision Tree Regression use R2 value: **0.95337(Absolute Error, best, None)**