MULTIPLE LINEAR REGRESSION-ML

Profit prediction pbm statement:

In mul_linear_reg , r2 value is 0.9358

SUPPORT VECTOR MACHINE-REGRESSION-ML

same pbm statement:

Using svm algorithm's hyper tuning parameters: {linear,rbf(non-linear),poly,sigmoid}

Hyper parameter	Linear R2 value	Rbf R2 value	Poly R2 value	Sigmoid R2 value
C=10	-0.03964	-0.0568	-0.053	-0.0547
C=100	0.1064	-0.05072	-0.0198	-0.0304
C=500	0.5928	-0.0243	0.114	0.070
C=1000	0.7802	0.00676	0.266	0.185
C=1500	0.8568	0.0377	0.3875	0.294
C=2000	0.8767	0.06751	0.4810	0.3970
C=3000	0.8956	0.12322	0.6370	0.591

In svm algorithm,(kernel='linear',C=3000) ,r2 value=0.8956

DECISION TREE REGRESSION-ML

Same pbm:

S.No	Criterion	Splitter	Max features	R2 value
1.	Squared_error	Best	None	0.9045
2.	Squared_error	Random	None	0.9350
3.	Squared_error	Best	Sqrt	0.5611
4.	Squared_error	Best	Log2	0.476
5.	Squared_error	Random	Sqrt	0.862
6.	Squared_error	Random	Log2	-0.0179
7.	Friedman_mse	Best	None	0.942
8.	Friedman_mse	Random	None	0.895
9.	Friedman_mse	Best	Log2	0.911
10.	Friedman_mse	Random	Log2	0.9102
11.	Friedman_mse	Best	Sqrt	0.7615
12.	Friedman_mse	Random	Sqrt	0.577
13.	Absolute_error	Best	None	0.952
14.	Absolute_error	Random	None	0.9049
15.	Absolute_error	Best	Sqrt	0.789
16.	Absolute_error	Random	Sqrt	0.9194
17.	Absolute_error	Best	Log2	0.8098
18.	Absolute_error	Random	Log2	0.8878
19.	Poisson	Best	None	0.9443
20.	Poisson	Best	Log2	0.7584
21.	Poisson	Best	Sqrt	0.800
22.	Poisson	Random	None	0.876
23.	Poisson	Random	Log2	0.8276

24.	Poisson	Random	Sqrt	0.8228

In decision tree algorithm,the hyper parameters (poisson,best,none) gives r2 value nearly to 1 .so this is the best model.