Rsquare value of ML Algorithm's to finalize best model

1. Algorithm is a learning process to train the model.
2. Evaluation is a scoring process to save the best model.
3. Hyperparameter means the changing the values of parameter passed to method/function to get best R2 value.
4. Standardization is meant to be patternized form, if a dataset consist huge difference between minimum and maximum values which affects the value of Evaluation metrics, In such case standardization is used to least difference between minimum and maximum values for good evaluation metrics value.

1. Multiple Linear Algorithm R2 Score : 0.8752 = 87%

2. Support Vector Machine:

S.NO	Hyper parameter	Linear R2 value	Radial bias factor "rbf" R2value	Poly R2 value	Sigmoid R2 value
1.	C=10	-0.1068	-0.1252	-0.1215	-0.1228
2.	C=100	0.0430	-0.1208	-0.0842	-0.0964
3.	C=500	0.5352	-0.1014	0.0718	0.0064
4.	C=1000	0.7942	-0.0800	0.2112	0.1376
5.	C=2000	0.8702	-0.0305	0.4920	0.3607
6.	C=3000	0.8584	0.0192	0.6603	0.4986

The SVM algorithm with Parameter (kernel = "linear", C = 2000) where model's prediction is good based on Evaluation metrics R2 which is 87%.

3. Decision Tree

S.NO	CRITERION	MAX FEATURES	SPLITTER	R2 VALUE
1	friedman_mse	Sqrt	best	0.8870
2	friedman_mse	Sqrt	Random	0.7427
3	friedman_mse	Log2	Random	0.6969
4	friedman_mse	log2	Best	0.4431
5	absolute_error	Sqrt	best	0.0569
6	absolute_error	Sqrt	Random	-0.4892
7	absolute_error	Log2	Random	-0.0871
8	absolute_error	log2	Best	-1.127
9	poisson	Sqrt	best	0.5635
10	poisson	Sqrt	Random	-0.1646
11	poisson	Log2	Random	0.2043

12	poisson	log2	Best	0.4480
13	mae	Sqrt	best	0.7514
14	mae	Sqrt	Random	0.6046
15	mae	Log2	Random	0.2356
16	mae	log2	Best	0.9127

Decision Tree Algorithm with Parameter (criterio =”mae”, splitter = “best”, max_feature = “log2”) where model’s prediction is good based on Evaluation metrics R2 which is 91%
mse – MEAN SQUARE ERROR
mae – MEAN ABSOLUTE ERROR.