

Machine Learning Algorithms and their r^2 values model wise.

1. Simple Linear Algorithm (r score value = 0.974099)
2. Multiple Linear Algorithm (r score value = 0.935868)
3. Support Vector Machine:

S.No	HYPER PARAMETER	LINEAR (r value)	RBF(NON LINEAR) (r value)	POLY (r value)	SIGMOID (r value)
1	C10	-2.43721	-0.05580	0.02531	-0.05761
2	C100	-357.07951	-0.03023	0.46566	-0.05878
3	C500	-8996.86064	0.05001	0.62077	-0.06401
4	C1000	higher minus val	0.16060	0.64032	-0.07070
5	C2000	higher minus val	0.28839	0.67174	-0.08453
6	C3000	higher minus val	0.39514	0.69099	-0.09898

The SVM Regression use R^2 value (non-linear (Rbf) and hyper parameter (C3000) = 0.8609

4. Decision Tree:

S.No	Criterion value	Splitter value	R value	Notes
1	squared_error	Best	0.93730, 0.94027	While re-running r value getting increased.
2	squared_error	random	0.85613	
3	friedman_mse	Best	0.89715	
4	friedman_mse	random	0.93740	
5	absolute_error	Best	0.95546	
6	absolute_error	random	0.89100	
7	poisson	Best	0.93215	
8	poisson	random	0.91728	

Using DecisionTreeRegressor, with Criterion = absolute_error, splitter = best we got high accuracy as 0.95546

Note: For each and every run the r_score values getting changed and not constant.