

Comparison of R^2 Value of different Machine Linear Regression algorithms for same dataset

1. Multiple Linear Regression- $R^2 = 0.935$
2. Support Vector Machine

S.NO	Hyper Parameter "c" value	R^2 linear	R^2 rbf	R^2 poly	R^2 sigmoid
1	10	-0.039	-0.0568	-0.053	-0.054
2	100	0.106	-0.0507	-0.019	-0.030
3	1000	0.780	0.0067	0.266	0.185
4	2000	0.876	0.0675	0.481	0.397
5	5000	0.900	0.2124	0.793	0.730

Best Model, Parameter= "linear" with c= 5000, $R^2 = 0.9$

3. Decision tree

S.NO	Splitter	R^2 squared_error	R^2 friedman_mse	R^2 absolute_error	R^2 poisson
1	best	0.913	0.935	0.966	0.914
2	random	0.871	0.908	0.871	0.905

Best Model, Splitter=best, criterion= absolute_error, $R^2 = 0.96$