

To find the Machine Learning Model prediction using r2_score with different method of Algorithms :

Simple Linear Regression: r2_score = 0.9740993407213511

Multiple Linear Regression: r2_score = 0.9358680970046243

Support Vector Machine:

S.No	Hyperparameter	linear	sigmoid	rbf	Poly
1.	C=10	-0.0396	-0.0547	-0.0568	-0.0531
2.	C=250	0.1064	0.0074	-0.0407	0.0328
3.	C=500	0.5929	0.0706	-0.2435	0.1146
4.	C=1000	0.7803	0.1850	0.0067	0.2661
5.	C=4000	0.8972	0.6282	0.1723	0.7326
6.	C=8000	0.9207	0.8365	0.3157	0.8286

In support vector Machine we get highest r2_score is 0.9207 using criterion = linear, C=8000

Decision Tree:

Criterion	Splitter	Max Features	R-squared Score
friedman_mse	random		0.955801
absolute_error	best		0.947169
absolute_error	random		0.934349
friedman_mse	best		0.928468
poisson	best		0.922014
squared_error	random		0.912916
squared_error	best		0.879664
poisson	random		0.84993
poisson	best	sqrt	0.842884
poisson	best	log2	0.83054
absolute_error	random	log2	0.792927
squared_error	random	sqrt	0.684288
absolute_error	random	sqrt	0.603936
absolute_error	best	sqrt	0.596133
squared_error	random	log2	0.593919
friedman_mse	best	log2	0.480231
friedman_mse	best	sqrt	0.433175
friedman_mse	random	log2	0.346469
poisson	random	log2	0.125542
friedman_mse	random	sqrt	0.064041
squared_error	best	log2	-0.00316
squared_error	best	sqrt	-0.12095
poisson	random	sqrt	-0.19011
absolute_error	best	log2	-0.6802

In decision tree we get highest r2_score = 0.9558

Criterion	Splitter	Max Features	R-squared Score
friedman_mse	random		0.955801