

## Machine Learning Regression using r2 value

1. MULTIPLE LINEAR REGRESSION:(R2 value=0.7894)

2.SUPPORT VECTOR REGRESSION:

PARAMETER	LINEAR	RBF	POLY	SIGMOID
C10	-0.5665	-0.0811	0.1593	0.0730
C100	-0.6359	0.3906	0.7508	0.5275
C500	0.7740	0.8283	0.8605	0.1437
C1000	0.7651	0.6964	0.8593	0.4906

TheSVM Regression use R2 value(POLY, C=1000 =0.8593)

3.DECISION TREE:

CRITERION	SPLITTER	R VALUE
squared_error	best	0.6816
squared_error	random	0.6886
friedman_mse	best	0.6939
friedman_mse	random	0.7220
absolute_error	best	0.7039
absolute_error	random	0.7164
poisson	best	0.7234
poisson	random	0.7067

The DecisionTreeRegression use R2 value (poisson=0.7234)

### 3. The RandomForestRegression:

CRITERION	n_estimators	r value
squared_error	10	0.8380
squared_error	100	0.8538
friedman_mse	10	0.8331
friedman_mse	10	0.8540
absolute_error	10	0.8350
absolute_error	10	0.8520

The RandomForestRegression use R2 value is(Friedman\_mse=0.8540)

The final machine learning best method of regression:

- TheSVM Regression use R2 value(POLY, C=1000 =0.8593) (or)
- The RandomForestRegression use R2 value is(Friedman\_mse=0.8540)