

## Assignment In Machine Learning

### Support Vector Machine

S.No	C Values	Linear r2 Values	Rbf r2 Values	Poly r2 Values	Sigmoid r2 Values
1.	100	-88.609	-33896.32	-2384.85	-3466.16
2.	500	-0.968	-1347.67	-93.011	-141.130
3.	1000	0.5715	-392.12	-18.7600	-30.972
4.	5000	0.8981	-13.0150	-0.0496	0.2744
5.	10000	0.9079	-4.5486	0.7509	0.7879

The best model in Support Vector Machine is Linear, C=10000, r2 value =0.9079

## Decision Tree Regression

S.no	Criterion	Splitter	R2 value
1	Squared error	Best	0.9040
2	Squared error	Random	0.6506
3	Friedman mse	Best	0.9002
4	Friedman mse	Random	0.8146
5	Poisson	Best	0.9194
6	Poisson	Random	0.9278
7	Absolute error	Best	0.9483
8	Absolute error	Random	0.8594

The best model in Decision Tree Regression is r2 value =0.9483 (**criterion=** absolute error, **splitter=** best)