

Assignment Regression

Multiple Regression R2 _value: 0.7894790

2.SUPPORT VECTOR MACHINE:

S.NO	HYPER PARAMETER	LINEAR	POLY (R_VALUE)	RBF(NON-LINEAR) (R_VALUE)	SIGMAID (R_VALUE)
1	C=10	0.46246	0.03871	-0.03227	0.03930
2	C=100	0.62887	0.61795	-0.32003	0.52761
3	C=1000	0.76493	0.85664	0.81020	0.28747
4	C=2000	0.74404	0.86055	0.85477	-0.59395
5	C=3000	0.74142	0.85989	0.86633	-2.12441
6	C=4000	0.74141	0.86000	0.87174	-5.51033

Support vector machine R2_value: 0.87174

Decision Tree Regressor

S.NO	CRITERION	SPETTER	R_VALUE
1	squared_error	BEST	0.692372
2	squared_error	RANDOM	0.762595
3	friedman_mse	BEST	0.700001
4	friedman_mse	RANDOM	0.73593
5	absolute_error	BEST	0.69148
6	absolute_error	RANDOM	0.73190
7	poisson	BEST	0.71701
8	poisson	RANDOM	0.73684

DECISION TREE REGRESSOR R2 VALUE: 0.762595

Random Forest

S.no	Criterion	n_estimators	R2 value
1	<i>squared_error</i>	10	0.83312464
2	<i>squared_error</i>	100	0.85355216
3	<i>absolute_error</i>	10	0.83483252
4	<i>absolute_error</i>	100	0.85266421
5	<i>friedman_mse</i>	10	0.83230313
6	<i>friedman_mse</i>	100	0.85375186
7	<i>poisson</i>	10	0.83137944
8	<i>poisson</i>	100	0.85277513

Random Forest R2 Value: 0.85375186

The final machine learning best method of Regression:

Support vector machine R2 Value: 0.87174

Random Forest R2 Value: 0.85375186