T.R. Dhuwarakesh

Regression – Machine Learning

R2_Score values for both “Decision Tree” & “SVM-Support Vector Machine”

Kindly find below the R2_Score values for SVM – Support Vector Machine by using different sets of parameters:

S.No.	kernel	gamma	C=10	C=100	C=1000	**r_score**
1	linear	scale	Yes	No	No	-0.03964
2	linear	scale	No	Yes	No	0.10646
3	linear	scale	No	No	Yes	0.78028
4	linear	auto	Yes	No	No	-0.03964
5	linear	auto	No	Yes	No	0.10646
6	linear	auto	No	No	Yes	0.78028
7	poly	scale	Yes	No	No	-0.05366
8	poly	scale	No	Yes	No	-0.0198
9	poly	scale	No	No	Yes	0.26616
10	poly	auto	Yes	No	No	-0.05366
11	poly	auto	No	Yes	No	-0.0198
12	poly	auto	No	No	Yes	0.26616
13	rbf	scale	Yes	No	No	-0.0568
14	rbf	scale	No	Yes	No	-0.05072
15	rbf	scale	No	No	Yes	0.00676
16	rbf	auto	Yes	No	No	-0.0568
17	rbf	auto	No	Yes	No	-0.05072
18	rbf	auto	No	No	Yes	0.00676
19	sigmoid	scale	Yes	No	No	-0.05471
20	sigmoid	scale	No	Yes	No	-0.03045
21	sigmoid	scale	No	No	Yes	0.18506
22	sigmoid	auto	Yes	No	No	-0.05471
23	sigmoid	auto	No	Yes	No	-0.03045
24	sigmoid	auto	No	No	Yes	0.18506

In the above mentioned R2_Score output the

regressor=SVR(kernel='linear', gamma='scale', C=1000) = R2_Score = 0.78028

&

regressor=SVR(kernel='linear', gamma='auto', C=1000) = R2_Score = 0.78028

Both the different parameters came up with the same result with the best R2_Score value.

Kindly find below the R2_Score values for Decision Tree Regressor by using different sets of parameters:

S.No.	criterion	splitter	r_score
1	squared_error	best	0.91194
2	squared_error	random	0.86405
3	friedman_mse	best	0.89311
4	friedman_mse	random	0.89198
5	absolute_error	best	0.93596
6	absolute_error	random	0.90213
7	poisson	best	0.93215
8	poisson	random	0.58105

In the above mentioned R2_Score output the

regressor=DecisionTreeRegressor(criterion='absolute_error ', splitter='best') = R2_Score = 0.93596

The above-mentioned parameter came with the best R2_Score value.