

Below Are The r2_scores Calculated For Different Regression ML Models with 50 Startups Data

1. **Multiple Linear Regression**---> r2_score = **0.934** --> it implies 93% accuracy in prediction of our test data

2. **SVM(Support Vector Machine)**--->Best r2_score = **0.930**---> it implies 16 percent max accuracy

S.NO	Hyper Parameter "C"	If Kernel = 'rbf' r2_score	If Kernel='linear' r2_score	Kernel='poly' r2_score	Kernel = 'sigmoid' r2_score
1	C= 1.0	0.371	- 0.055	-0.057	- 0.057
2	C= 10.0	-0.056	- 0.039	-0.053	- 0.054
3	C = 100	-0.050	0.106	-0.019	-0.030
4	C = 1000	0.006	0.780	0.266	0.185
5	C= 2000	0.067	0.867	0.481	0.397
6	C= 10000	0.371	0.923	0.812	0.853
7	C= 0.1	-0.057	-0.051	-0.057	- 0.057
8	C=0.01	-0.057	-0.057	-0.057	- 0.057
9	C=0.0001	-0.057	-0.057	-0.057	- 0.057
10	C = 100000	0.708	0.930	0.40	-0.843

3. **Decision Tree - Regressor**--->Best r2_score = **0.958**---> it implies 95.8 percent max accuracy

S.NO	criterion	splitter	max_features	r2_score
1	squared_error	best	None	0.882
2	squared_error	best	auto	0.908
3	squared_error	best	sqrt	0.633
4	squared_error	best	log2	0.698
5	squared_error	random	auto	0.886
6	squared_error	random	sqrt	0.553
7	squared_error	random	log2	0.049
8	friedman_mse	best	auto	0.893
9	friedman_mse	best	sqrt	0.625
10	friedman_mse	best	log2	0.302
11	friedman_mse	random	auto	0.958
12	friedman_mse	random	sqrt	0.218
13	friedman_mse	random	log2	0.354
14	absolute_error	best	None	0.921
15	absolute_error	best	auto	0.928
16	absolute_error	best	sqrt	0.503
17	absolute_error	best	log2	0.426
18	absolute_error	random	auto	0.893
19	absolute_error	random	sqrt	0.750
20	absolute_error	random	log2	0.482
21	friedman_mse	random	None	0.716
22	friedman_mse	best	None	0.923
23	absolute_error	random	None	0.547
24	squared_error	random	None	0.846

