1. MLR r2 vale for the 50_Startups.csv dataset -> **0.93**

2. SVM (Support Vector Machine) -> 50_Startups.csv dataset

Sno	Hyper Parameter C value	linear r value	rbf (default) r value	poly	sigmoid
1	10	-0.03	-0.05	-0.05	-0.054
2	100	0.106	-0.05	-0.019	-0.03
3	1000	0.78	0.006	0.26	0.18
4	2000	0.87	0.067	0.48	0.39
5	3000	0.895	0.123	0.63	0.59
6	4000	0.897	0.172	0.73	0.62

Conclusion:

The r2 value for the hyper parameter of C=4000 linear is 0.87

3. Decision Tree -> 50_Startups.csv dataset

SNo	criterion	max_features	splitter	R2 value
1	squared_error (default)	None(default)	Base(default)	0.87
	squared_error (default)	Sqrt	base	0.68
2	squared_error (default)	Log2	base	0.36
3	squared_error (default)	auto	base	0.91
4	squared_error (default)	Auto	random	0.90
5	squared_error (default)	none	random	0.87
6	squared_error (default)	sqrt	random	0.05
7	squared_error (default)	Log2	random	-0.14
8	mae	Auto	Base	0.93
9	Mae	Log2	Base	0.93
10	Mae	sqrt	Base	0.26
11	Mae	none	Base	0.93
12	Mae	None	random	0.92
13	Mae	Log2	Random	-0.39
14	Mae	Sqrt	Random	-0.81
15	Mae	Auto	Randam	0.89
16	friedman_mse	None	random	0.85

17	friedman_mse	Auto	random	0.40
18	friedman_mse	Sqrt	random	0.24
19	friedman_mse	Log2	random	-0.137
20	friedman_mse	Auto	base	0.91
21	friedman_mse	None	base	0.92
22	friedman_mse	Log2	base	0.94
23	friedman_mse	Sqrt	base	0.72

Conclusion:

The r2 value of the decision tree regression use (mae,auto,base) -> 0.93