

## **1. Multi Linear Regression:**

R<sup>2</sup> Value of Multi Linear Regression is **0.9358**

## **2. Support Vector Regression:**

S.No	C (Regularization parameter)	Standard Scalar	Kernel			
			Linear	Poly	RBF	Sigmoid
1	default (1.0)	NO	0.8753	-0.1154	-0.125	-0.1258
2	default (1.0)	YES	-0.1238	-0.1253	-0.1257	-0.1254
3	10	NO	0.2398	-0.12158	-0.1252	-0.1228
4	10	YES	-0.1068	-0.12158	-0.1252	-0.1228
5	100	NO	-0.1068	-0.08424	-0.1208	-0.09643
6	100	YES	0.04302	-0.08424	-0.1208	-0.09643
7	1000	NO	0.7942	0.2112	-0.08	0.137658
8	1000	YES	0.7942	0.2112	-0.08	0.137658
9	100000	NO	0.9678	0.82094	0.6009	0.85596
10	100000	YES	0.9678	0.82094	0.6009	0.85596

Best R<sup>2</sup> Value is **0.9678** for Kernel -> Linear and C -> 100000

## **3. Decision Tree:**

S.No	Criterion	Splitter	MaxFeatures	R <sup>2</sup> Value
1	squared_error	best	None	0.91902
2	squared_error	best	sqrt	0.13863
3	squared_error	best	log2	0.75218
4	squared_error	random	None	0.854255
5	squared_error	random	sqrt	-0.59608
6	squared_error	random	log2	0.4544
7	friedman_mse	best	None	0.88783
8	friedman_mse	best	sqrt	0.5364439
9	friedman_mse	best	log2	0.89082
10	friedman_mse	random	None	0.819906
11	friedman_mse	random	sqrt	-0.18895
12	friedman_mse	random	log2	-0.18895
13	absolute_error	best	None	0.93744
14	absolute_error	best	sqrt	0.73226
15	absolute_error	best	log2	0.713811
16	absolute_error	random	None	0.8807
17	absolute_error	random	sqrt	0.75937
18	absolute_error	random	log2	0.605432

Best R<sup>2</sup> value is 0.93744 for **Criterion** -> absolute\_error and **Splitter** -> best and N