To find the Machine Learning Regression method using r2 value.

1.Multilinear Regression (R2 value) =0.93586.

2.SUPPORT VECTOR MACHINE(SVM):

S/NO	HYPER PARAMETER	LINEAR	RBF	POLY	SIGMOID
1	C10	-0.03964	-0.05680	-0.05366	-0.05471
2	C100	0.10646	-0.05366	-0.01980	-0.03045
3	C500	0.59289	-0.02432	0.11468	0.07057
4	C1000	0.78028	0.00676	0.26616	0.18506
5	C2000	0.87677	0.06751	0.48100	0.39706
6	C3000	0.89567	0.12322	0.63700	0.59136

The **SVM REGRESSION** use **R2 value (**Linear and Hyper parameter C3000=**0.89567).**

3.DECISION TREE:

S/NO	CRITERION	SPLITTER	MAX_FEATURES	R VALUE
1	Squared_error	best	none	0.92548
2	Friedman_mse	best	none	0.93742
3	Friedman_mse	random	none	0.96489
4	Friedman_mse	best	auto	0.91887
5	Friedman_mse	random	auto	0.89163
6	Friedman_mse	best	sqrt	0.32958
7	Friedman_mse	random	sqrt	-0.66963
8	Friedman_mse	best	log2	0.73290
9	Friedman_mse	random	log2	0.65585

The **DECISION TREE REGRESSION** use R2 value(friedman_mse,random,none)=**0.96489.**

4.RANDOM FOREST:

S/NO	CRITERION	MAX_FEATURES	N_ESTIMATORS	R VALUE
1	Squared_error	1.0(default)	50	0.94463
2	Friedman_mse	sqrt	100	0.76085
3	Friedman_mse	Log2	50	0.68891
4	Friedman_mse	Log2	100	0.76325

The **RANDOM FOREST** use R2 value(squared_error,1.0(default),50)=**0.94463.**