Baby-Step Assignment

Support Vector Machine :

Dataset used : **50_Startups.csv**

Hyper Parameter	**linear**	**poly**	**rbf**	***sigmoid***
C = 0.1	-0.0573067	-0.057448	-0.0574795	-0.057458594
C = 10	-0.039644	-0.05366	-0.05680	-0.054719
C = 50	0.026107	-0.03850	-0.0540987	-0.043710785
C = 100	0.1064681	-0.0198	-0.05072602	-0.0304535
C = 500	0.59289	0.114684	-0.0243233	0.070572

SVM regression : (Linear and C = 500) R2 score is 0.59289

Decision tree Algorithm :

Dataset used : **50_Startups.csv**

criterion	**max_features**	**splitter**	**R_Score**
squared_error	-	Best	0.903397
friedman_mse	-	Best	0.9162416
absolute_error	-	Best	0.951211
poisson	-	Best	0.9396650
squared_error	-	random	0.886822

friedman_mse	-	random	0.86350936
absolute_error	-	random	0.81129
poisson	-	random	0.881360
squared_error	sqrt	Best	0.8064948
friedman_mse	sqrt	Best	0.616398
absolute_error	sqrt	Best	0.693152
poisson	sqrt	Best	0.7774505
squared_error	sqrt	random	0.42349408
friedman_mse	sqrt	random	0.853235
absolute_error	sqrt	random	0.41830
poisson	sqrt	random	0.23518217
squared_error	*log2*	Best	0.4693062
friedman_mse	*log2*	Best	0.9465527
absolute_error	*log2*	Best	0.802126
poisson	*log2*	Best	0.383955
squared_error	*log2*	random	-0.1307470
friedman_mse	*log2*	random	0.677929
absolute_error	*log2*	random	0.68539
poisson	*log2*	random	0.863488

Decision tree regression : R2 score

(Friedman_mse, log2, best) = 0.9465527
(absolute_error, best) = 0.951211