1. **Insurance Charge Prediction**

   Stage1: Machine Learning

   Stage2: Supervised Learning

   Stage3: Regression

2. 1338rows and 6 columns
3. Preprocessing method-nominal data-one hot coding
4. **Multiple Linear Regression**-r_score0.78

SVM-

S.No	Hyper Parameter	Rbf (r_score)	Linear (r_score)	Poly (r_score)	Sigmoid (r_score)
1	C=10	-0.081	-0.001	-0.093	-0.09
2	C=100	-0.12	0.54	-0.099	-0.11
3	C=1000	-0.11	0.63	-0.054	-1.711
4	C=10000	-0.01	0.744	0.35	-124.108
5	C=100000	0.53	0.741	0.76	-1167.41
6	C=1000000	0.81	0.741	0.85	-115
7	C=10000000	0.87	0.741	0.86	-115

DecisionTree-

Criterion	**Splitter**	**R_Score**
Squared_error	best	0.68
	random	0.66
Friedman_mse	best	0.70
	random	0.68
Absolute_error	best	0.74
	random	0.72
Poisson	best	0.67
	random	0.74

RandomForest

n_estimator	**Squared_error (r_score)**	**Friedman_mse (r_score)**	**Absolute_error (r_score)**	**Poisson (r_score)**
10	0.82	0.82	0.84	0.82
50	0.85	0.85	0.85	0.84
100	0.85	0.85	0.85	0.85

5.SVM gave the best accuracy with an R_score value of 0.87 compared to Multiple Linear Regression,Decision Tree and Random Forest