1) This is the insurance charges prediction based on some parameters.

   # Inputs and output are in numbers
   # Requirement is clear
   # inputs and outputs are labled
   # Output in numerical
   So,

   Machine Learning---> Supervised Learning---> Regression

2) Total number of rows, columns = (1338,6)

3) Here we are two columns as string nominal datatype so, we have to convert it to numerical by using " On Hot Encoding " method

4) 1. We are using Linear Regression Algorithm
      # it's has no hyper tuning parameters so it is has only one model
      r_value is 0.78913454847886

   2. We are using Support Vector Machine Algorithm

No of Model	kernel	gamma	r_score
1	linear	scale	-0.010195463
2	linear	auto	-0.010195463
3	poly	scale	-0.075717338
4	poly	auto	-0.075717338
5	rbf	scale	-0.083405161
6	rbf	auto	-0.083405161
7	sigmoid	scale	-0.075446385

3. We are using Decision Tree Algorithm

No of Model	Hyper Tuning Parameters		r_score
	criterion	splitter	
1	squared_error	best	0.66305309
2	squared_error	random	0.745286708
3	friedman_mse	best	0.687082124
4	friedman_mse	random	0.720185731
5	absolute_error	best	0.725552763
6	absolute_error	random	0.735108264
7	poisson	best	0.67880449
8	poisson	random	0.67836712

4. We are using Random Forest Algorithm

No of Model	Hyper Tuning Parameters			r_score
	n_estimators	criterion	max_feat	
1	100	squared_error	1	0.847911353
2	100	squared_error	sqrt	0.866171806
3	100	squared_error	log2	0.866171806
4	100	squared_error	None	0.852464543
5	100	absolute_error	1	0.849861597
6	100	absolute_error	sqrt	0.866661872
7	100	absolute_error	log2	0.866661872
8	100	absolute_error	None	0.856570154
9	100	friedman_mse	1	0.847911353
10	100	friedman_mse	sqrt	0.866171806
11	100	friedman_mse	log2	0.866171806
12	100	friedman_mse	None	0.852464543
13	100	poisson	1	0.844390257
14	100	poisson	sqrt	0.859143407
15	100	poisson	log2	0.859143407
16	50	poisson	None	0.850502031

from this data we got the good model from Random Forest Algorithm
And Hyper tuning parameters

(n_estimation=100, criteration=' absolute_error', max_future='sqrt'/'log2')