

Problem Statement or Requirement:

A client's requirement is, he wants to predict the insurance charges based on the several parameters. The Client has provided the dataset of the same.

As a data scientist, you must develop a model which will predict the insurance charges.

SVM Hypertune parameter - Kernel

R_score	Kernel
-0.0884	Rbf(default)
-0.0642	poly
-0.111	<i>linear</i>
-0.089	<i>sigmoid</i>

SVM Hypertune parameter - Kernel,C

R_score	Kernel	C
-0.0895	Rbf(default)	0.1
-0.0884		1
-0.0819		10
-0.12480		100
-0.1174		1000
-0.08625	<i>Poly</i>	0.1
-0.06429		1
-0.0931		10
-0.0997		100
-0.055		1000
-0.1220	<i>linear</i>	0.1
-0.1116		1
-0.0016		10
0.5432		100
0.63403		1000
-0.0897	<i>sigmoid</i>	0.1
-0.0899		1
-0.0907		10
-0.118		100
-1.6659		1000

SVM Hypertune parameter - Kernel,C,gamma

R_score	Kernel	C	Gamma
-0.08957	rbf	0.1	scale
-0.0884		1	
-0.0819		10	
-0.124		100	
-0.1174		1000	
0.86298	<i>Poly</i>	0.1	auto
0.8654548	poly	1	
0.86510		10	
0.6490		100	
-17.982		1000	
-0.0897	sigmoid	0.1	scale
-0.0899		1	
-0.09078		10	
-0.11814		100	
-1.665908		1000	

Problem Statement or Requirement:

A client's requirement is, he wants to predict the insurance charges based on the several parameters. The Client has provided the dataset of the same. As a data scientist, you must develop a model which will predict the insurance charges.

SVM Hypertune parameter - Kernel

SVM Hypertune parameter - Kernel,c,degree

R_score	Kernel	C	degree
-0.08625	poly	0.1	3
-0.06429		1	
-0.09311		10	
-0.099761		100	
-0.0555		1000	

Decis

sion Tree Parameter (R_score = 0.689962)

DT Hypertune parameter - criterion,splitter

R_score	criterion	splitter
0.6899	<i>squared_error</i>	<i>Best(default param)</i>
0.74953	<i>squared_error</i>	<i>random</i>
0.68512	<i>friedman_mse</i>	<i>Best(default param)</i>
0.6958	<i>friedman_mse</i>	<i>random</i>
0.65568	<i>absolute_error</i>	<i>Best(default param)</i>
0.72429	<i>absolute_error</i>	<i>random</i>
0.7298742	<i>poisson</i>	<i>Best(default param)</i>
0.709470	<i>poisson</i>	<i>random</i>

DT Hypertune parameter - criterion,splitter,min_samples_leaf,min_samples_split

R_score	criterion	splitter	min_samples_leaf	min_samples_split
0.69896	<i>squared_error</i>	<i>random</i>	1	2
0.69179	<i>friedman_mse</i>	<i>Best(default param)</i>	1	2
0.7156	<i>absolute_error</i>	<i>random</i>	1	2
0.86766	<i>poisson</i>	<i>Best(default param)</i>	0.1	0.2

Random Forest (R_score = 0.8569)

Random Forest Hypertune parameter -

R_score	n_estimators	criterion	min_samples_split
0.85280	50	<i>squared_error</i>	2
0.86484	20	<i>absolute_error</i>	0.1
0.85578	100	<i>friedman_mse</i>	2
0.8715	40	<i>poisson</i>	1