

## 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.

- 1.) Identify your problem statement  
Machine Learning → Supervised Learning → Regression
- 2.) Tell basic info about the dataset (Total number of rows, columns)  
Input – Age, Sex, BMI, Children, Smoker  
Output - Charges
- 3.) Mention the pre-processing method if you're doing any (like converting string to number –nominal data)  
We need to convert character to numbers. We can achieve that by using Pandas library. We have some of the columns with nominal data. Convert character to numbers by using get\_dummies
- 4.) Develop a good model with r2\_score. You can use any machine learning algorithm; you can create many models. Finally, you have to come up with final model.  
Multiple Linear Regression – 0.7865  
Random Forest – 0.8767
- 5.) All the research values (r2\_score of the models) should be documented. (You can make tabulation or screenshot of the results.)  
Done

6.) Mention your final model, justify why u have chosen the same.

At the meantime, We are choosing Random Forest  
By using Machine Learning Algorithm.