**Assignment Machine Learning**

1. Import the dataset and perform data encoding either using Label encoder or df.replace function. (10 pts)

**Regression**

1. Split the data in a way that ‘X’ contains all values other than the “charges” column, which is the output column, hereby called ‘y’. (5 pts)
2. Perform train-test split with 33% test size. (5 pts)
3. Choose any one regression model to train the data and calculate the accuracy. (10 pts)
4. Report the charges you get for the following input data:- (15 pts)

Age = 33, Sex = male, bmi = 22.705, children = 0, smoker = no, region = “northwest”

**Classification**

1. Split the data in a way that ‘X’ contains all values other than the “region” column, which is the output column, hereby called ‘y’. (5 pts)
2. Perform train-test split with 33% test size. (5 pts)
3. Choose any one classification model to train the data and calculate the accuracy. (10 pts)
4. Report the charges you get for the following input data:- (15 pts)

Age = 19, Sex = female, bmi = 27.900, children = 0, smoker = yes, charges = 16844.92400