Name : Siddharth Pandya Date : 20.8.20

Roll No. : 23 Subject : CS

Ans1 There are four predictors present x_1, x_2, x_3 and x_4.

The equation of the regression model are :

$$Y = -55.9 + 0.0105 x_1 - 0.107 x_2 + 0.579 x_3 - 0.870 x_4$$

~~Let's start with the interpretation~~

The strength of the model is strong as there is strong evidence to indicate that at least one of number of x_1, x_2, x_3 and x_4 help explain it as (p value = 0) and R-Sq = 80.2%.

and R-Sq (Adj) = 78.7 %

The strength of the predictors x_3 and x_4 are strong and x_1 and x_2 are slight weak as P value is greater than 0.

Name : Siddharth Pandya
Roll No. : 23
Date : 20.2.20
Subject : CS

Ans 2 The $R^2 \rightarrow 0.69$ ie 69% of the variation in the housing price is explained by all the independent Variable.

At 5% LOS, the model is useful for predictions

$H_0: \beta_1 = \beta_2 = \beta_3 = \dots = \beta_8 = 0$

Vs

$H_1:$ Not H_0

In Anova Table $F = 25.5631$,

At 5% LOS, there is enough evidence to conclude that atleast one of the predictor is useful for predicting housing price

The regression equation is:

$$\hat{y} = 420.1625 + 179.7723 x_1 + 22359.91 x_2 - 94113.1 x_3 + 340047.7 x_4 + 257387.9 x_5 - 22249.7 x_6 + 79672.97 x_7 - 2251.09 x_8$$