In Class Assignment #4

Instructions:

The pull strength of a wire bond is an important characteristic. The data gives information on pull strength (y) , die height (x_1), post height (x_2), loop height (x_3) , wire length(x_4) , bond width on the die (x_5), and bond width on the post (x_6).

a) Analyze this data to find which linear model is the best fit for this data (give details on how you decided which model is best.

b) Report the amount of variation explained by the model you chose in part a).

c) Find a 95% Confidence interval for each of the β_j's in your model, and interpret.

d) Holding all else fixed, how does a unit change in x_4 change the average value of y?

e) For a specimen with $x_1 = 5.5, x_2 = 19.3, x_3 = 30.2, x_4 = 90, x_5 = 2,$ and $x_6 = 1.85$ find the predicted value of y.

f) Check the model assumptions.