

MTH 441: Lab 6

P 1. Consider the **Delivery Time** data set. Calculate the following measures of outliers:

- (a) Leverage point,
- (b) COOK'S D,
- (c) DFBETAS,
- (d) DFFITS,
- (e) COVRATIO.

Based on the above measures, find the outliers present in the data.

P 2. Consider the **Acetylene** data set.

- (a) Normalise the data set by subtracting the associated mean and dividing by the square root of $(n - 1) \times$ the sample variance of each variables.
- (b) Consider all the regressors including the interactions and second order terms. Find the correlation matrix. Observe the correlation.
- (c) Find the VIF for the regression model where all the regressors including the interactions and second order terms are considered.