o-Nitrophenol Standard curve and Jackknife Resampling

In this lab, you will create a standard curve using stock 257 uM o-nitrophenol. The goal is to (i) check your ability to use an adjustable pipette, (ii) learn the process of least-squares regression, and (iii) learn the process of resampling statistically analysis to estimate errors.

Use the adjustable pipettes, dH$_2$O, and stock 257 uM o-nitrophenol to create six solutions that span the concentration range from 0 uM to 257 uM. Read all six solutions at the absorption maximum. One of the six solutions should be 0 uM o-nitrophenol which should also be used as the blank.

Read the Data fitting paper and use the non-linear method on your linear data. Determine the slope and y-intercept for your data. Perform jackknife resampling to estimate the error of your slope and y-intercept.