403 Prelab #2

Philippe Larocque
V00903595

PreLab Questions for Experiment 2

1. What is the size of N_p and N_n for the given data structure?
2. What are the sizes of matrix $\hat{X}^T, \widehat{X}, \hat{w}$, and y?
3. Express the equation to calculate $\hat{w}$ derived from E2.2a.

1. $N_P = 4 \times 40$ OR 5×40 if including label

   $N_n = 4 \times 80$ OR 5×80 if including label

2. $\hat{X}^T = 5 \times 120$

   $\hat{X} = 120 \times 5$

   $\hat{w} = 5 \times 1$

   $y = 1 \times 30$

3. $\hat{w} = \left(\hat{X}^T \hat{X}\right)^{-1} \hat{X}^T y$