PLA example

9/12/18

Use the Perceptron Learning Algorithm to find a hypothesis function that matches the data set. That is, find $h(x_1, x_2) = \text{sign}(w_0 + w_1 x_1 + w_2 x_2)$ with:

$$\begin{aligned} h(1,1) &= -1 \\ h(3,0) &= -1 \\ h(1,3) &= 1 \\ h(3,3) &= 1 \\ h(2,2) &= 1 \end{aligned}$$

(a) Start your algorithm with $\mathbf{w}(0) = \begin{bmatrix} -2 \\ 0 \\ 2 \end{bmatrix}$ and check the data points in the order they are given, until all data points are labeled correctly.

(b) Use your answer in (a) to find $h(2,1)$.