

Ungraded exercise Machine Learning

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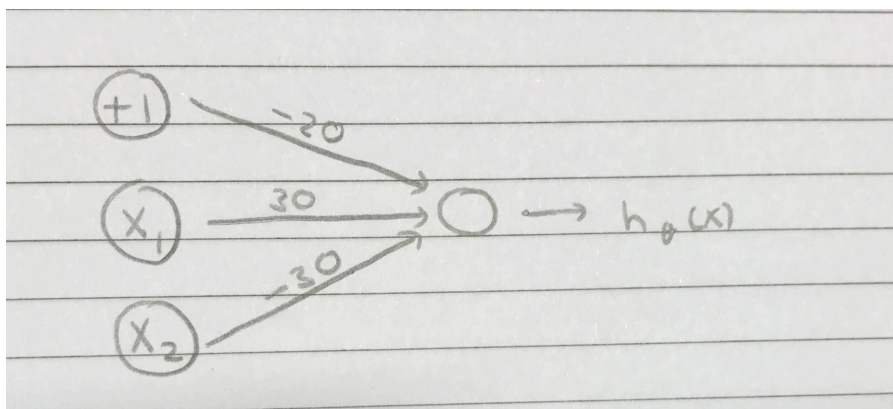
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Exercise 1

$$\begin{aligned} W_0 + W_1 X_1 + W_2 X_2 &= 0 \\ W_0 + W_1 \cdot -1 + W_2 \cdot 0 &= 0 \\ W_0 - W_1 &= 0 \\ W_0 &= W_1 \end{aligned}$$
$$\begin{aligned} W_0 + W_1 X_1 + W_2 X_2 &= 0 \\ W_0 + W_1 \cdot 0 + W_2 \cdot 2 &= 0 \\ W_0 + 2W_2 &= 0 \\ W_2 &= \frac{-W_0}{2} \end{aligned}$$
$$W_0 = 2 \quad W_1 = 2 \quad W_2 = -1$$

Exercise 2

- a. A AND (NOT B) two-input perceptron



- b. A XOR B two-layer network

