Homework 01

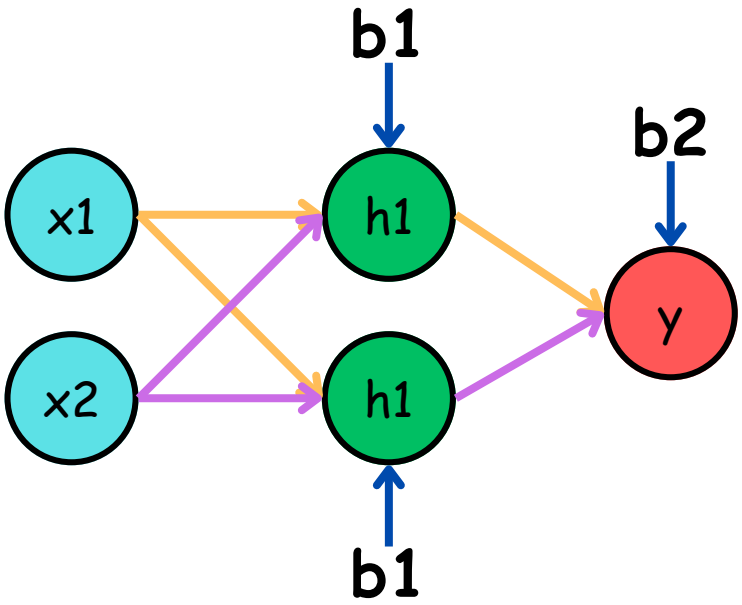
Zahra Amini
Filoger Deep Learning

Topic: NN & Backpropagation

Point: 1200

Deadline: 1403-04-14, 12(noon)

Q1



$x_1 = 0, x_2 = 1, y = 1$

$$W^1 = \begin{bmatrix} 2.5 & 1 \\ -1.5 & -3 \end{bmatrix}, \quad W^2 = \begin{bmatrix} 1 & 0.5 \end{bmatrix}$$

$b^1 = +1 \qquad b^2 = +1$

Activation Function hidden & output Layer = Sigmoid

Use MAE as Loss Function

$\alpha = 0.1$

Compute two Step of backpropagation

Update W_{12}^1 & b^1

Q2

House Price Prediction

Implement Linear Regression in Python, using a Deep Learning Neural Network and optimize it.

Hint: Just use these columns:
price, latitude, longitude, baths, bedrooms, Area Size