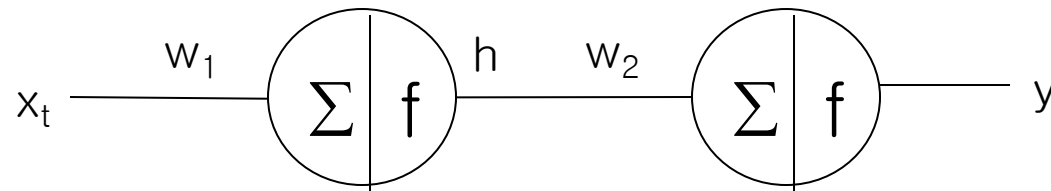


Assignment

Neural Network

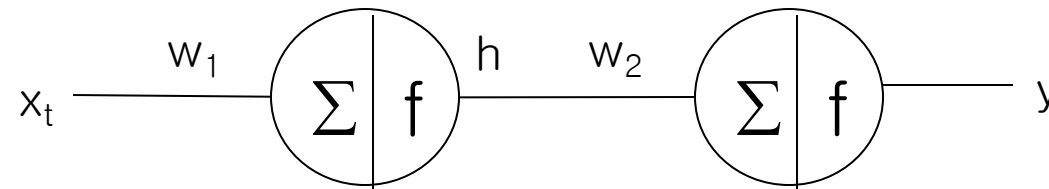
1. We have one training sample, (1,1). The initial weights are $w_1 = 0.5$, $w_2 = 0.5$. The learning rate is $\eta = 0.1$. The activation function is Sigmoid. Loss function is MSE.



- ① Update each of w_1 and w_2 once by gradient descent method.
- ② Update each of w_1 and w_2 once more by gradient descent method.

Neural Network

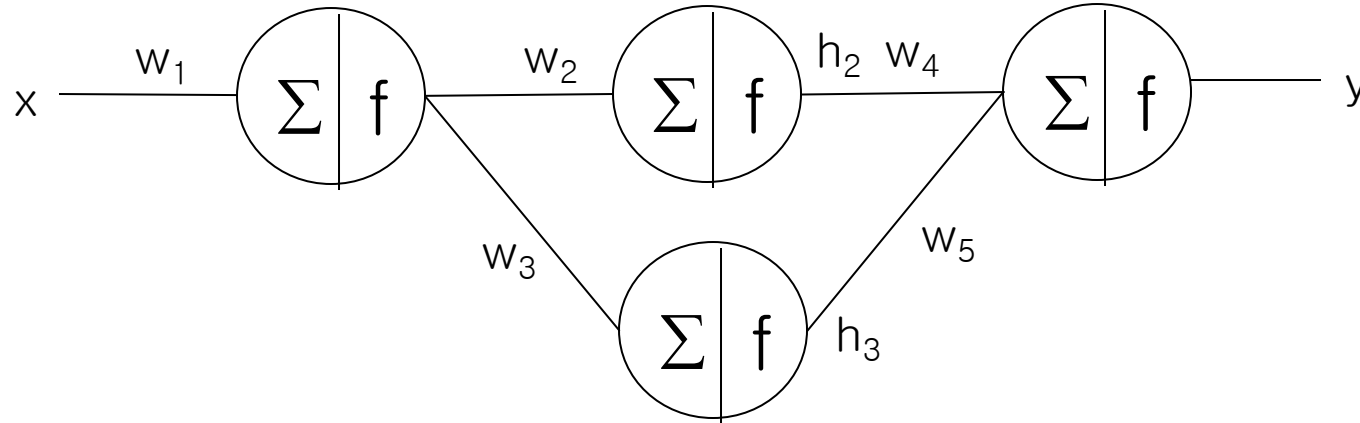
2. We have two training samples, $(1,1)$ and $(0,0)$. The initial weights are $w_1 = 1, w_2 = 1$. The learning rate is $\eta = 0.1$. The activation function is Sigmoid. Loss is MSE



Update w_1 once by gradient descent method.

Neural Network

3. We have one training sample, (1,1). The initial weight for all the weight is 1. The learning rate is $\eta = 0.1$. The activation function is ReLU. Loss is MSE.



Update w_1 once by gradient descent method.

Thank You