One hidden layer
Neural Network

Neural Networks
Overview

deeplearning.ai

What is a Neural Network?

x_1

x_2 ◯ → $\hat{y}$

x_3

x

w ◆ $\boxed{z = w^T x + b}$ → $\boxed{a = \sigma(z)}$ → $\boxed{\mathcal{L}(a, y)}$

b

x_1 ◯

x_2 ◯ ◯ → $\hat{y}$

x_3 ◯

x

$W^{[1]}$ → ◆ $\boxed{z^{[1]} = W^{[1]}x + b^{[1]}}$ → $\boxed{a^{[1]} = \sigma(z^{[1]})}$ → $\boxed{z^{[2]} = W^{[2]}a^{[1]} + b^{[2]}}$ → $\boxed{a^{[2]} = \sigma(z^{[2]})}$ → $\boxed{\mathcal{L}(a^{[2]}, y)}$

$b^{[1]}$

$W^{[2]}$

$b^{[2]}$

Andrew Ng