ML w4 neural networks

Non-linear Hypotheses.

polynomial ~~te~~logistic regression — overfitting
— high cost (O^n)

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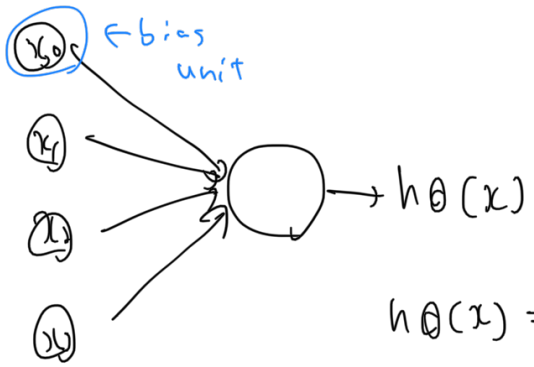
we need non linear hypothesis for machine learning problems

Neuron Model : Logistic Unit

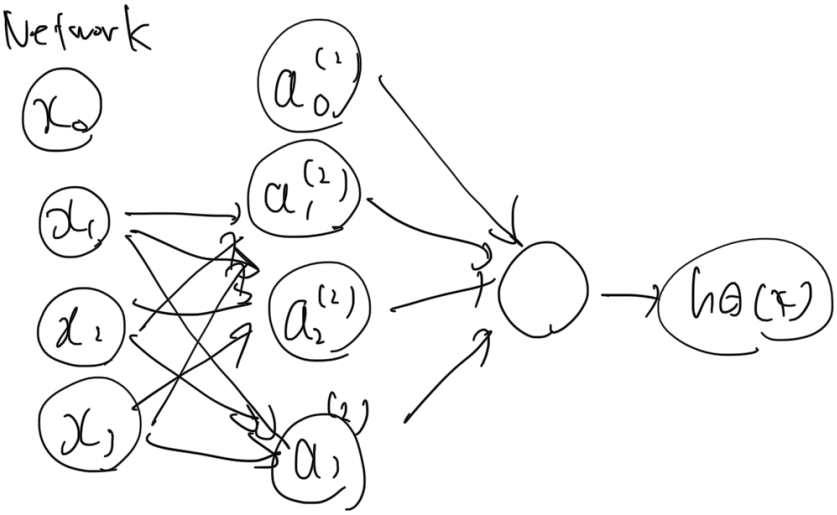


$$h_\theta(x) = \frac{1}{1 + e^{-\theta^T x}}$$

↑ activation function

$$x = \begin{bmatrix} x_0 \\ x_1 \\ x_2 \\ x_3 \end{bmatrix} \quad \theta = \begin{bmatrix} \theta_0 \\ \theta_1 \\ \theta_2 \\ \theta_3 \end{bmatrix}$$

Neural Network



layer 1 layer 2 layer 3