The Multilayer Perceptron

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What is a Multilayer Perceptron?

In the previous notes, we were looking at the perceptron (or single-layer perceptron). In these notes, we will be exploring the multilayer perceptron. The multilayer perceptron (MLP) is the name of a modern feed-forward neural network. In short, the MLP consists of multiple neurons (or single-layer perceptrons) with possibly nonlinear activation functions connected with each other through layers.
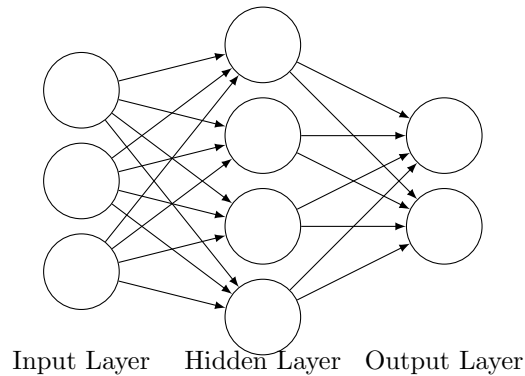

Input Layer   Hidden Layer   Output Layer

Figure 1: Simple multilayer perceptron with input, hidden, and output Layers

Figure 1 shows a simple MLP. The input layer consists of neurons for each feature in the input vector $\mathbf{x} \in \mathbb{R}^n$. Next, we have the hidden layer which contains...