Perceptrons: An Overview

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"We expect the perceptron to be the embryo of an electronic computer that will be able to walk, talk, see, write, reproduce itself and be conscious of its existence." - The New York Times, 1958.

1 Introduction: What is a Perceptron?

The perceptron is an algorithm for learning a binary classifier: a function that maps its input x (a real-valued **vector**) to an output value $f(x)$ (a single binary value). Shown below is a mathematical definition:

$$f(x) = \left\{ \begin{array}{ll} 1 & wx + b > 0 \\ 0 & otherwise \end{array} \right.$$

2 Workings: What drives a Perceptron?

3 Applications: Why are Perceptrons useful?

4 Evolution: What has the idea of a Perceptron led to?