Stanford CS229 Lecture - 3

Perceptron

$g(z) = \frac{1}{1+e^{-z}}$ (Sigmoid function)

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

$g(z) = \begin{cases} 1 & z \geq 0 \\ 0 & z < 0 \end{cases}$ (Perceptron)

$h_\theta(x) = g(\theta^T x)$

Formula

$$\theta_j := \theta_j + \alpha \underbrace{(y^{(i)} - h_\theta x^{(i)})} x_j^{(i)}$$

→ 0 (algorithm got it right)

→ 1 (algorithm is wrong)

output ← $y^{(i)}$ can be only 0, 1

prediction ← $h_\theta(x)^i$ can be only 0, 1

Visualisation