

## Basics of Neural Network Programming

Logistic Regression

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# Logistic Regression cost function

### Logistic Regression cost function

$$\hat{y} = \sigma(w^T x + b)$$
, where  $\sigma(z) = \frac{1}{1 + e^{-z}}$ 

Given 
$$\{(x^{(1)}, y^{(1)}), ..., (x^{(m)}, y^{(m)})\}$$
, want  $\hat{y}^{(i)} \approx y^{(i)}$ .

Loss (error) function: