Logistic Regression

1) It is a machine learning algorithm under supervised learning and classification tasks.
2) The hypotheses is given by equation (5). $g(z)$ stands for the logistic or sigmoid function.

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

3) Note

$$g'(z) = g(z)(1 - g(z)) \tag{2}$$

4)