

Foundations of Machine Learning

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Chapter 1

Supervised Learning

1.1 Regression Problem

Given a set of datapoints, $D = \{(X_i, y_i)\}_{i=1}^n$ where x_i are the features and y_i are the target, corresponding to the features. The hypothesis function is

$$h_{\theta}(X) = \theta_0 + \theta_1 x_1 + \theta_2 x_2 + \dots + \theta_n x_n = \sum_{i=0}^n \theta_i x_i \quad (x_0 = 1) \quad (1.1)$$