**COST FUNCTION**

Before we learn about CF lets clear some terms required to understand CF.

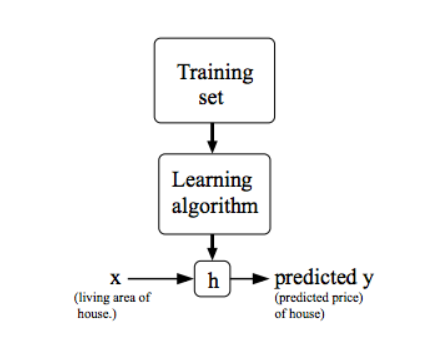
**Input/output variables:**

X denotes matrix of input variables, whereas Y denotes matrix of output variables.

**Hypothesis:**

To describe the supervised learning problem slightly more formally, our goal is, given a training set, to learn a function h : X → Y so that h(x) is a “good” predictor for the corresponding value of y. For historical reasons, this function h is called a hypothesis.

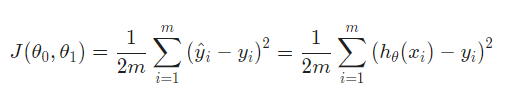
**Model representation:**

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**COST FUNCTION :**

We can measure the accuracy of our hypothesis function by using a cost function .

This function is otherwise called the "Squared error function", or "Mean squared error".



To break it apart, it is where is the mean of the squares of or the difference between the predicted value and the actual value.