* This video introduces linear regression as the first learning algorithm, showcasing its process in supervised learning.
* Supervised learning involves predicting real-valued outputs (regression) or discrete values (classification).
* Notation is introduced: M for training examples, X for input variables, Y for target variables, and X, Y for individual training examples.
* The hypothesis (H) function models the relationship between inputs (X) and outputs (Y).
  + The job of the learning algorithm is to determine this function from the training set and utilize this to predict Y given some X.
* Linear regression is a specific hypothesis function that assumes a linear relationship between X and Y.
  + H(x) = Θ0 + Θ1 \* x
* Linear regression with one variable is also known as simple linear regression or univariate linear regression.

