**Change of Address** Has your delivery address changed? Please help us keep our records accurate and fill out any information below that has recently changed.

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hypothesis = $h_\theta(x) = \theta_0 + \theta_1 X$

$\theta_i$ = parameter of hypothesis

$J(\theta_0\ \theta_1) \Rightarrow y = mx + b$

$\theta_0$ → b ; $\theta_1$ → T → mx

cost function : find the average-residual

find the value of $\theta_0, \theta_1$ so that the average-residual is minimum.

gradient descent: keep changing the parameter till we end up at a minimum. or

keep subtracting the derivetive of the cost-function with respect to certain parameters ($\theta_0$ or $\theta_1$) untill derivetive = 0 where we reach a local extream

$$h_\theta(x) = \theta_0 + \theta_1 X$$

$$J(\theta_0, \theta_1) = \frac{1}{2m} \sum_{i=1}^{m} (\hat{y}_i - y_i)^2$$

$$\theta_j = \theta_j - \alpha \frac{d}{d\theta} J(\theta_0, \theta_1)$$

for $j = 0$ ; $j = 1$