

Stanford  
ONLINE

DeepLearning.AI



# Training Linear Regression

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## Gradient Descent

Have some function  $J(w, b)$  *for linear regression  
or any function*

Want  $\min_{w, b} J(w, b)$   *$\min_{w_1, \dots, w_n, b} J(w_1, w_2, \dots, w_n, b)$*

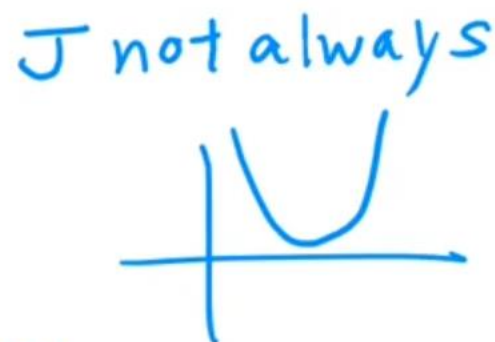
Outline:

Start with some  $w, b$  *(set  $w=0, b=0$ )*

Keep changing  $w, b$  to reduce  $J(w, b)$

Until we settle at or near a minimum

*may have  $>1$  minimum*



gradient descent

$J(w, b)$   
not squared  
error cost  
not linear  
regression

