

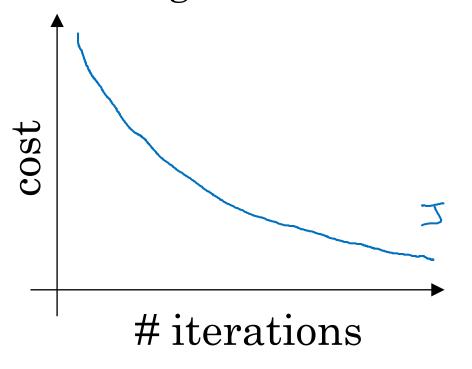
deeplearning.ai

Optimization Algorithms

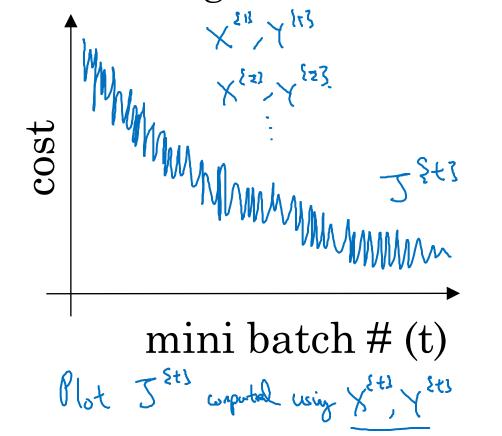
Understanding mini-batch gradient descent

Training with mini batch gradient descent

Batch gradient descent



Mini-batch gradient descent

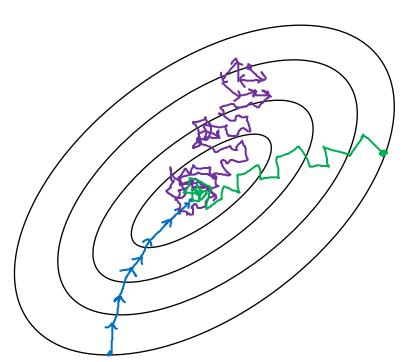


Choosing your mini-batch size

> If mini-both size = m : Borth godul desert. (X ?13, Y ?13) = (X, Y).

> If mini-both size = 1 : Stochasta graph desert. Every example is it our (X ?13, Y ?13) = (K (1), Y (1)) ... (K ?1) Mini-both.

(x ?13, Y ?13) = (K (1), Y (1)) ... (K ?1) Mini-both.



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(min-hoth size

not too by/small)

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Vectorantion.

(N1000)

(N) vero) pe • Make propo without processing extinct truly set.

Bootch

gradient desemb

(min; horter size = m)

Two long

per iteration

Andrew Ng

Choosing your mini-batch size

If small tray set: Use both graher descent.
(m < 2000) Typical minz-borth sizes! -> 64 , 128, 256, 512 2^{2} 2^{8} 2^{3} Make sure ministral fit in CPU/GPU memory. X Ex Y Ex 3