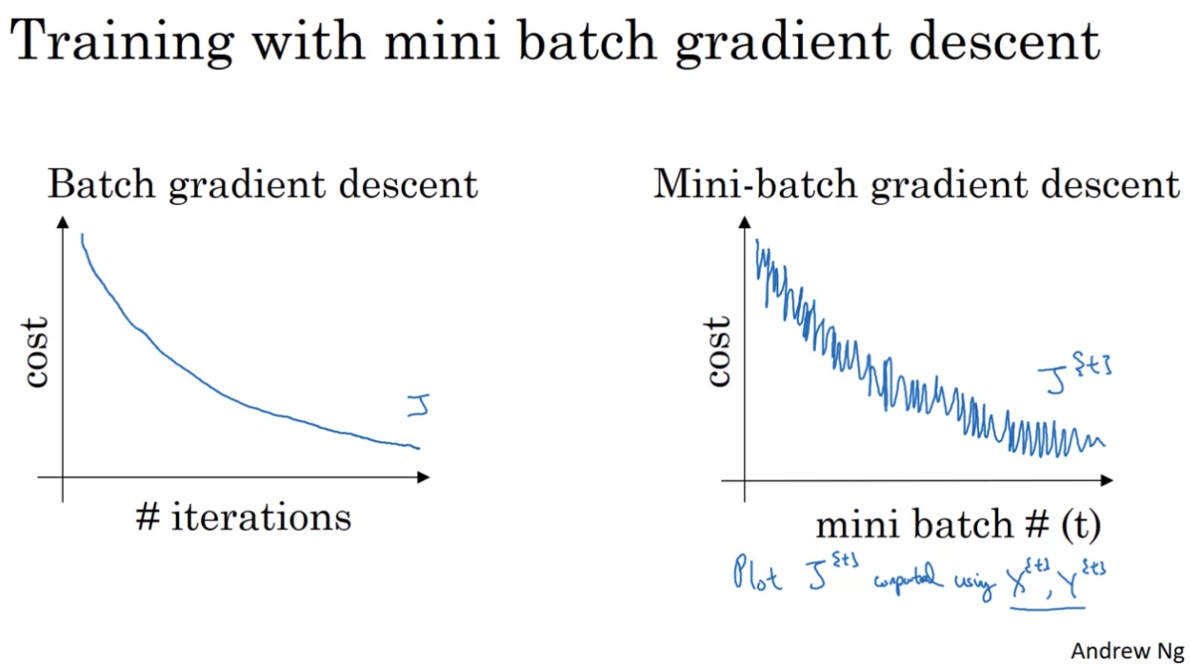
2. Understanding Mini-batch Gradient Descent

Tags	mini-batch gradient descent

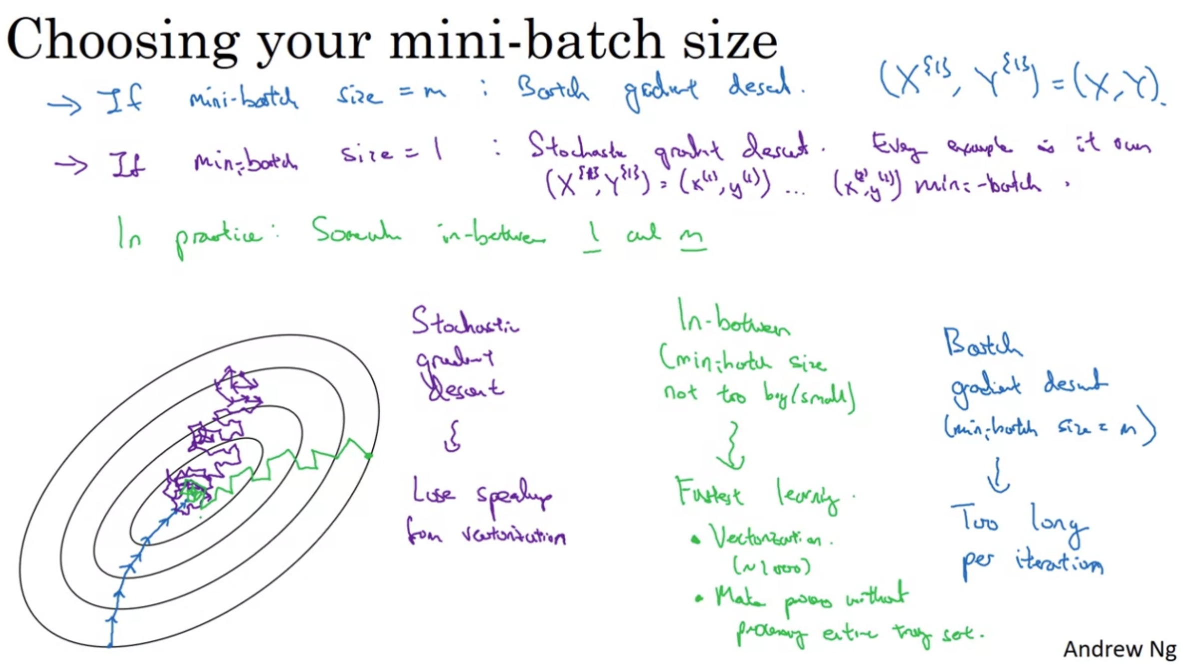
Training with mini-batch gradient descent



> `mini-batch` : it may not decrease every iteration

- oscillations(진동화): 미니배치의 경우, 특정 배치에서는 학습이 쉬워서 cost function값이 낮을 수 있다(반대도 마찬가지!)

Choosing your mini-batch size



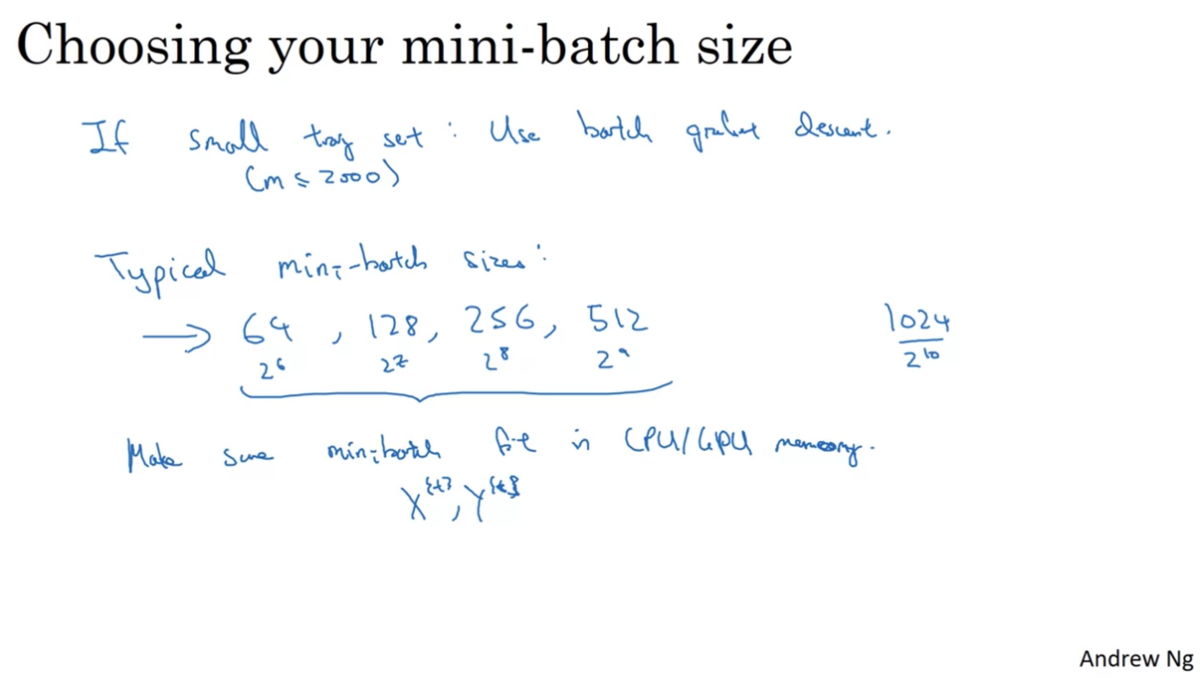
- batch gradient descent: Too long per iteration
- stochastic gradient descent: `Lose` almost all your speed up from vectorization

> if mini-batch size ==1 then Every example is its own mini-batch

⇒ 미니배치 사이즈가 1이라면 모든 샘플들이 미니배치가 되는 것이다?!

💡 We talk about learning rate decay later

Choosing your mini-batch size



> train data가 2000개 이하라면 batch gradient descent를 사용하라
> 그 외의 경우 64, 128, 256, 512의 미니배치 사이즈를 적용한 mini-batch gradient를 사용하라

💡 Make sure mini-batch fit in CPU/GPU memory