deeplearning.ai

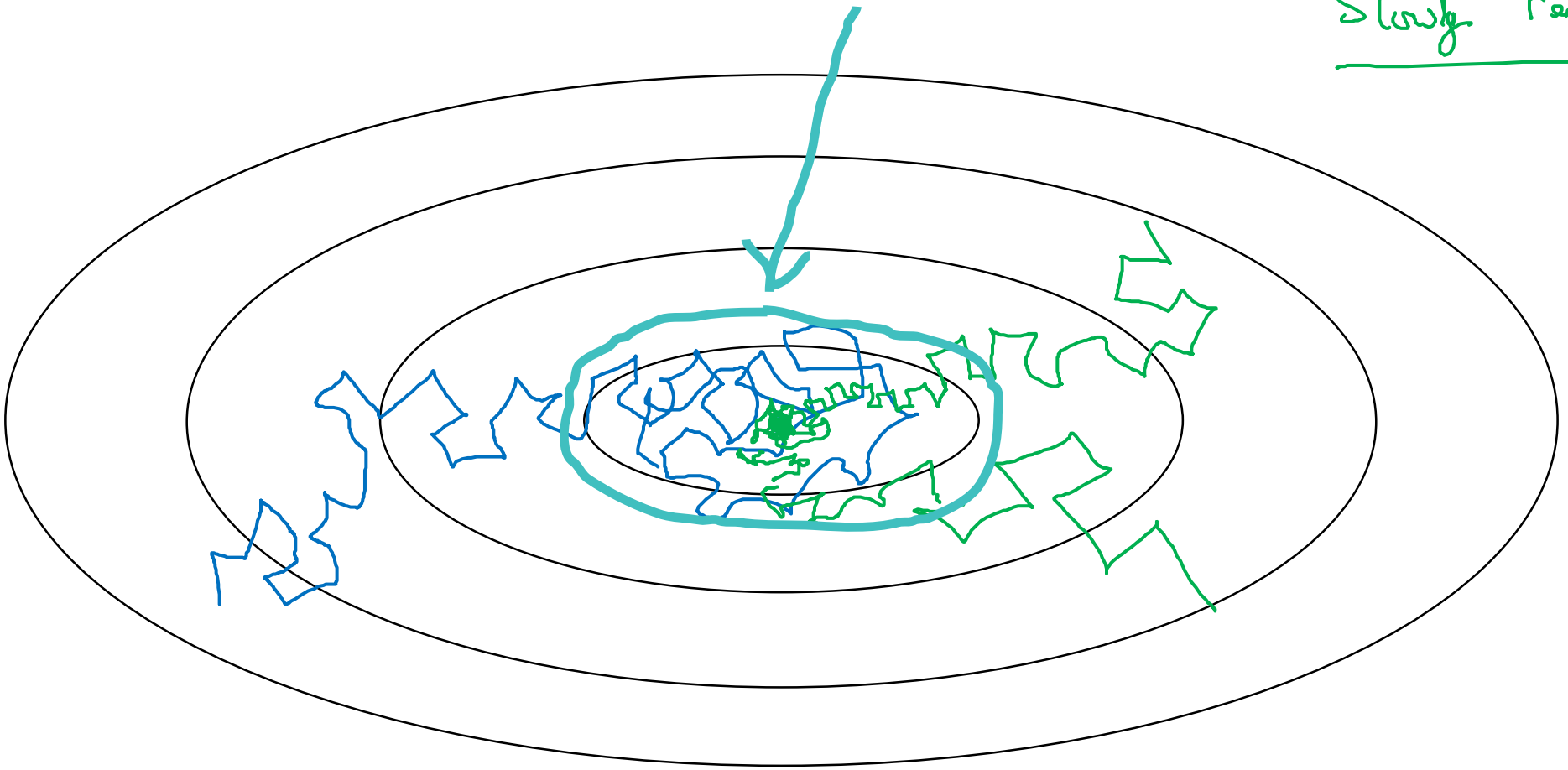
Optimization Algorithms

Learning rate decay

Learning rate decay

Decreasing the learning rate when approaching here

Slowly reduce α



Slowly reducing the learning rate when approaching the minimum value.

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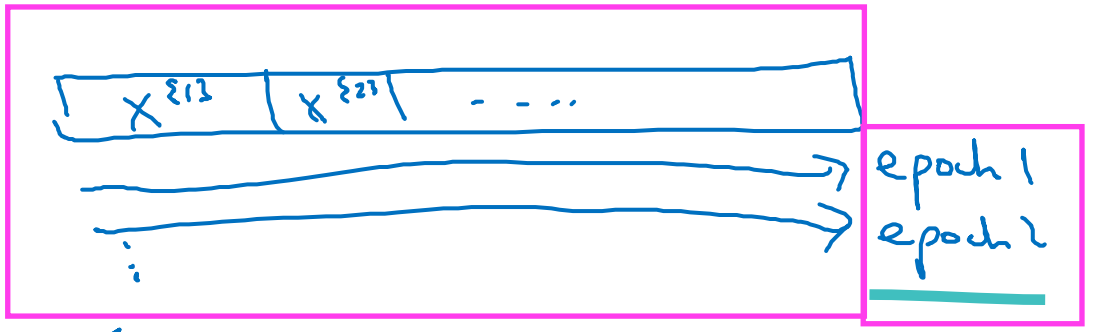
Learning rate decay

1 epoch = 1 pass through data.

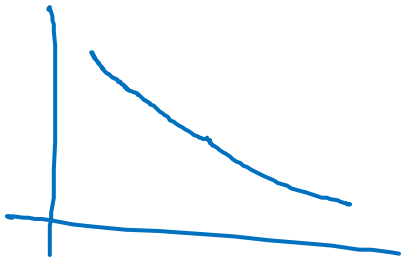
$$\alpha = \frac{1}{1 + \text{decay\_rate} * \text{epoch\_num}} \alpha_0$$



$\alpha_0 = 0.2$

decay_rate = 1

Epoch	α
1	0.1
2	0.67
3	0.5
4	0.4
⋮	⋮



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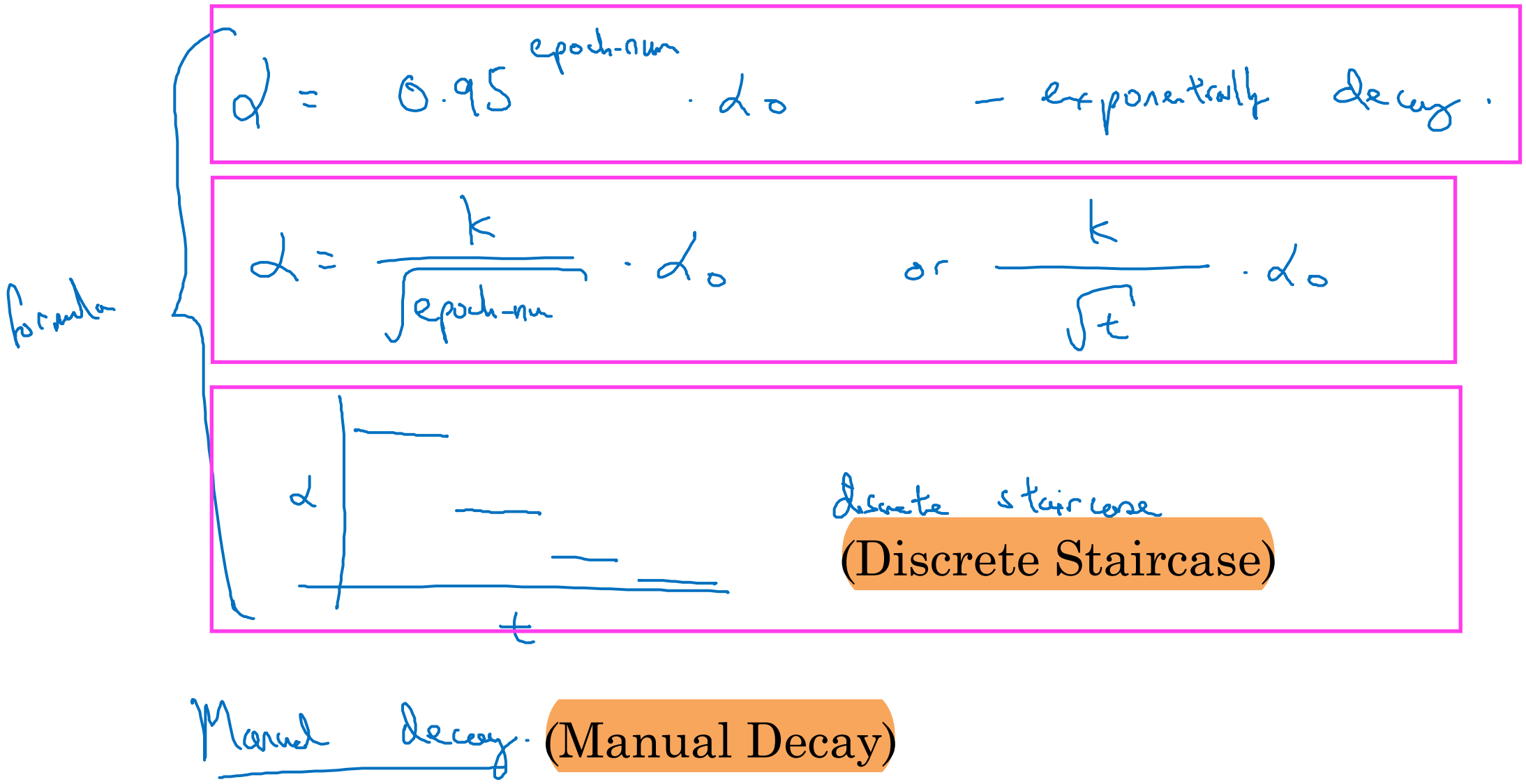
Other learning rate decay methods



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