EXAM PROFESSIONAL MACHINE LEARNING ENGINEER TOPIC 1 QUESTION 109 DISCUSSI...

Actual exam question from Google's Professional Machine Learning Engineer
Question #: 109
Topic #: 1
[All Professional Machine Learning Engineer Questions]

During batch training of a neural network, you notice that there is an oscillation in the loss. How should you adjust your model to ensure that it converges?

A. Decrease the size of the training batch.

B. Decrease the learning rate hyperparameter.

C. Increase the learning rate hyperparameter.

D. Increase the size of the training batch.

Show Suggested Answer

by mymy9418 at *Dec. 18, 2022, 1:58 a.m.*

Comments

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hiromi Highly Voted 1 year, 10 months ago

Selected Answer: B

B
larger learning rates can reduce training time but may lead to model oscillation and may miss the optimal model parameter values.

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fitri001 Most Recent 6 months, 2 weeks ago

Selected Answer: B

A. Decrease Batch Size: While a smaller batch size can sometimes help with convergence, it can also lead to slower training. It might not necessarily address the issue of oscillation.
C. Increase Learning Rate: A higher learning rate can cause the loss to jump around more erratically, potentially worsening the oscillation problem.
D. Increase Batch Size: A larger batch size can lead to smoother updates but might also make the model less sensitive to local gradients and hinder convergence, especially with an already oscillating loss.

upvoted 1 times

Akel123 6 months, 2 weeks ago

Selected Answer: C

I don't understand

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M25 1 year, 6 months ago

Selected Answer: B

Went with B

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TNT87 1 year, 8 months ago

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Answer B

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enghabeth 1 year, 9 months ago

Selected Answer: B

having a large learning rate results in Instability or Oscillations. Thus, the first solution is to tune the learning rate by gradually decreasing it.
https://towardsdatascience.com/8-common-pitfalls-in-neural-network-training-workarounds-for-them-7d3de51763ad

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mymy9418 1 year, 10 months ago

Selected Answer: B

https://ai.stackexchange.com/questions/14079/what-could-an-oscillating-training-loss-curve-represent#:~:text=Try%20lowering%20the%20learning%20rate,step%20and%20overshoot%20it%20again.

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