EXAM PROFESSIONAL MACHINE LEARNING ENGINEER TOPIC 1 QUESTION 157 DISCUSSI...

Actual exam question from Google's Professional Machine Learning Engineer
Question #: 157
Topic #: 1
[All Professional Machine Learning Engineer Questions]

You recently developed a deep learning model. To test your new model, you trained it for a few epochs on a large dataset. You observe that the training and validation losses barely changed during the training run. You want to quickly debug your model. What should you do first?

A. Verify that your model can obtain a low loss on a small subset of the dataset

B. Add handcrafted features to inject your domain knowledge into the model

C. Use the Vertex AI hyperparameter tuning service to identify a better learning rate

D. Use hardware accelerators and train your model for more epochs

Show Suggested Answer

by PST21 at *July 20, 2023, 4:06 p.m.*

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fitri001 6 months, 2 weeks ago

Selected Answer: A

Isolating the Issue: Training on a small subset helps isolate the problem to the model itself rather than the entire training pipeline or large dataset.
Efficiency: Debugging with a small dataset is faster, allowing you to iterate through potential solutions quicker.
Identifying Fundamental Issues: If the model struggles to learn even on a small dataset, it indicates a more fundamental problem in the model architecture, data preprocessing, or learning algorithm.

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tavva_prudhvi 11 months, 3 weeks ago

Selected Answer: A

Verifying that your model can obtain a low loss on a small subset of the dataset is a good first step for debugging because it helps you determine if your model is capable of fitting the data and learning from it. If your model cannot fit a small subset of the data, it may indicate issues with the model architecture, initialization, or optimization algorithm. By starting with a small subset, you can identify and fix these issues more quickly, before moving on to larger-scale training and more complex debugging tasks.

upvoted 3 times

Mdso 1 year, 3 months ago

Selected Answer: A

I choose A

upvoted 1 times

PST21 1 year, 3 months ago

Selected Answer: A

the first step to quickly debug the deep learning model is to verify that it can obtain a low loss on a small subset of the dataset (Option A). If the model fails to achieve good results on the smaller subset, further investigation is required to identify and address potential issues with the model.

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