- Expert Verified, Online, Free.

≡ MENU

G Google Discussions

Exam Professional Machine Learning Engineer All Questions

View all questions & answers for the Professional Machine Learning Engineer exam

Go to Exam

EXAM PROFESSIONAL MACHINE LEARNING ENGINEER TOPIC 1 QUESTION 28 DISCUSSIO..

Actual exam question from Google's Professional Machine Learning Engineer

Question #: 28

Topic #: 1

[All Professional Machine Learning Engineer Questions]

You are training a Resnet model on AI Platform using TPUs to visually categorize types of defects in automobile engines. You capture the training profile using the

Cloud TPU profiler plugin and observe that it is highly input-bound. You want to reduce the bottleneck and speed up your model training process. Which modifications should you make to the tf.data dataset? (Choose two.)

- A. Use the interleave option for reading data.
- B. Reduce the value of the repeat parameter.
- C. Increase the buffer size for the shuttle option.
- D. Set the prefetch option equal to the training batch size.
- E. Decrease the batch size argument in your transformation.

Show Suggested Answer

by A chohan at June 18, 2021, 2:23 a.m.

Comments

Type your comment...

♣ ralf_cc Highly Voted ★ 3 years, 3 months ago AD - please weigh in guys ♠ □ upvoted 39 times
å danielp14021990 Highly Voted № 2 years, 12 months ago A. Use the interleave option for reading data Yes, that helps to parallelize data reading. B. Reduce the value of the repeat parameter No, this is only to repeat rows of the dataset. C. Increase the buffer size for the shuttle option No, there is only a shuttle option. D. Set the prefetch option equal to the training batch size Yes, this will pre-load the data. E. Decrease the batch size argument in your transformation No, could be even slower due to more I/Os.
https://www.tensorflow.org/guide/data_performance upvoted 25 times
♣ PhilipKoku Most Recent ② 5 months ago
Selected Answer: AD A) and D) are the right answers! upvoted 1 times
harithacML 1 year, 3 months ago
Selected Answer: AD A and D: https://www.tensorflow.org/guide/data_performance, interleave and prefetch upvoted 2 times
▲ M25 1 year, 6 months ago
Selected Answer: AD Went with A & D
MithunDesai 1 year, 10 months ago
Selected Answer: AD
yes AD
Selected Answer: AD Yes AD
GCP72 2 years, 2 months ago
YESAD - agree with danielp1
u_phoria 2 years, 3 months ago
Selected Answer: AD AD - agree with danielp1
By the way, this is handy to understand the significance of shuffle buffer_size: https://stackoverflow.com/a/48096625/1933315 upvoted 2 times
♣ onku 2 years, 3 months ago
Selected Answer: DE
I think D & E are correct.
Xrobat 2 years, 4 months ago
AD should be the right answer. upvoted 3 times
eddy1234567890 2 years, 4 months ago
Answers?
upvoted 1 times

For me it should be D and E as well. Prefetching will help reading data while training is performed, which helps with the

□ **3 93alejandrosanchez** 3 years ago

bottleneck, D is for sure right. I think decreasing batch size would help too, because less records will be read in each training step (reading a lot of records would lead to the bottleneck described, as reading data is costly).

I'm not 100% sure on A, personally I don't think processing many input files concurrently would help in this case because the reading operation is precisely the problem. However, I'm no expert in this topic so I might be wrong.

upvoted 2 times

☐ ♣ klemiec 2 years, 8 months ago

D is not correct answer. Instead of decrising batch size, incrising may help. (https://cloud.google.com/tpu/docs/performance-guide - "TPU model performance" section)

upvoted 1 times

☐ ♣ Goosemoose 5 months ago

you mean E, not D, right?

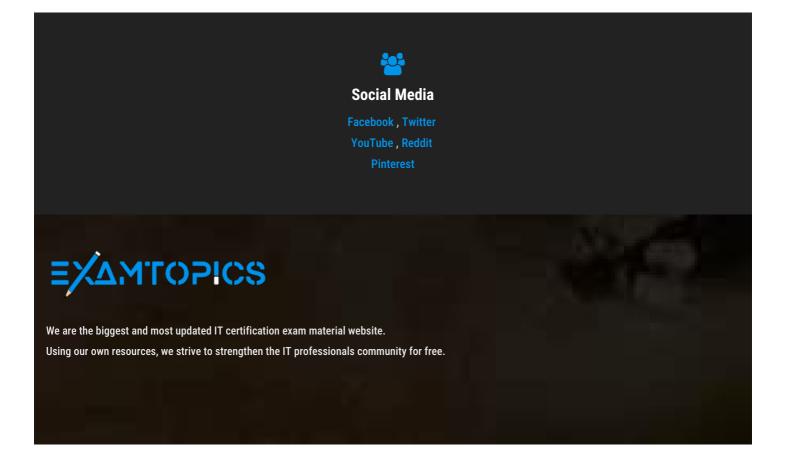
upvoted 1 times

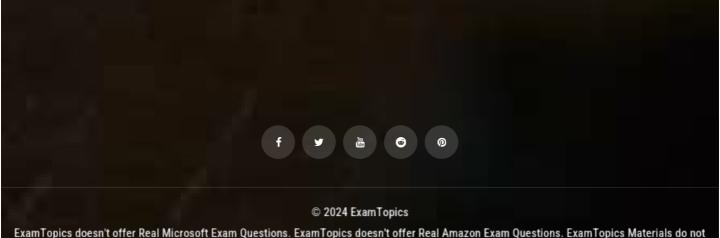
🖃 💄 gcp2021go 3 years, 3 months ago

I think it should be DE. I found this article https://towardsdatascience.com/overcoming-data-preprocessing-bottlenecks-with-tensorflow-data-service-nvidia-dali-and-other-d6321917f851

upvoted 3 times

Start Learning for free





ExamTopics doesn't offer Real Microsoft Exam Questions. ExamTopics doesn't offer Real Amazon Exam Questions. ExamTopics Materials do not contain actual questions and answers from Cisco's Certification Exams.

CFA Institute does not endorse, promote or warrant the accuracy or quality of ExamTopics. CFA® and Chartered Financial Analyst® are registered trademarks owned by CFA Institute.