EXAM PROFESSIONAL MACHINE LEARNING ENGINEER TOPIC 1 QUESTION 190 DISCUSSI...

Actual exam question from Google's Professional Machine Learning Engineer
Question #: 190
Topic #: 1
[All Professional Machine Learning Engineer Questions]

You recently deployed a model to a Vertex AI endpoint. Your data drifts frequently, so you have enabled request-response logging and created a Vertex AI Model Monitoring job. You have observed that your model is receiving higher traffic than expected. You need to reduce the model monitoring cost while continuing to quickly detect drift. What should you do?

A. Replace the monitoring job with a DataFlow pipeline that uses TensorFlow Data Validation (TFDV)

B. Replace the monitoring job with a custom SQL script to calculate statistics on the features and predictions in BigQuery

C. Decrease the sample_rate parameter in the RandomSampleConfig of the monitoring job

D. Increase the monitor_interval parameter in the ScheduleConfig of the monitoring job

Show Suggested Answer

by pikachu007 at *Jan. 13, 2024, 3:44 a.m.*

Comments

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LaxmanTiwari 3 months, 3 weeks ago

fitri001 2 months, 1 week ago
A. DataFlow pipeline with TFDV: While DataFlow pipelines with TFDV can be used for data validation, they require additional development and management overhead compared to simply adjusting the Vertex AI Model Monitoring job configuration.
B. Custom SQL script: Custom SQL scripts might not be as efficient or maintainable as the built-in Vertex AI Model Monitoring features. Additionally, it would require manually calculating drift metrics, which can be error-prone.
D. Increase monitor_interval: Increasing the monitoring interval reduces the frequency of monitoring checks, potentially delaying drift detection. This is not ideal if data drifts frequently.

upvoted 1 times

fitri001 6 months ago

Selected Answer: C

Reduced Monitoring Overhead: By decreasing the sample_rate, you instruct Vertex AI Model Monitoring to analyze a smaller percentage of incoming requests. This directly reduces the billing cost associated with monitoring.
Fast Drift Detection: A well-chosen sampling rate can still provide enough data to capture significant data drift. Monitoring a smaller sample shouldn't significantly impact your ability to detect drift if it's happening rapidly.

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fitri001 6 months ago

A. DataFlow pipeline with TFDV: While DataFlow pipelines with TFDV can be used for data validation, they require additional development and management overhead compared to simply adjusting the Vertex AI Model Monitoring job configuration.
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D. Increase monitor_interval: Increasing the monitoring interval reduces the frequency of monitoring checks, potentially delaying drift detection. This is not ideal if data drifts frequently.

upvoted 2 times

Carlose2108 7 months, 4 weeks ago

Selected Answer: C

I went with C.

upvoted 1 times

ddogg 8 months, 3 weeks ago

Selected Answer: C

C as the sample size will be relative to the traffic and also reduce costs.

upvoted 1 times

b1a8fae 9 months, 1 week ago

Selected Answer: C

C. https://cloud.google.com/vertex-ai/docs/model-monitoring/overview#considerations

upvoted 1 times

pikachu007 9 months, 1 week ago

Selected Answer: C

The answer is C, simplest and does not affect the time it takes to detect the drift

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