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EXAM PROFESSIONAL MACHINE LEARNING ENGINEER TOPIC 1 QUESTION 174 DISCUSSI...

Actual exam question from Google's Professional Machine Learning Engineer

Question #: 174

Topic #: 1

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You developed a custom model by using Vertex AI to forecast the sales of your company's products based on historical transactional data. You anticipate changes in the feature distributions and the correlations between the features in the near future. You also expect to receive a large volume of prediction requests. You plan to use Vertex AI Model Monitoring for drift detection and you want to minimize the cost. What should you do?

- A. Use the features for monitoring. Set a monitoring-frequency value that is higher than the default.
- B. Use the features for monitoring. Set a prediction-sampling-rate value that is closer to 1 than 0.
- C. Use the features and the feature attributions for monitoring. Set a monitoring-frequency value that is lower than the default.
- D. Use the features and the feature attributions for monitoring. Set a prediction-sampling-rate value that is closer to 0 than 1.



Show Suggested Answer

by [b1a8fae](#) at Jan. 8, 2024, 6:23 p.m.

Comments

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  **fitri001** 6 months, 2 weeks ago

Selected Answer: D

Feature and Feature Attribution Monitoring: Since you anticipate changes in feature distributions and correlations, monitoring both features and their attributions provides a more comprehensive view of potential drift. Feature attributions explain how each feature contributes to the model's predictions. Monitoring them helps identify if these contributions are changing as expected.

Lower Prediction Sampling Rate: This reduces the cost associated with Vertex AI Model Monitoring. The sampling rate determines the percentage of prediction requests used for monitoring calculations. A lower rate reduces the number of predictions analyzed, lowering monitoring costs. However, it's important to strike a balance between cost and having enough data for drift detection.



   upvoted 3 times

  **BlehMaks** 9 months, 3 weeks ago

Selected Answer: D

if we expect a large volume of prediction requests then pick D. if we expect the changes to be infrequent then C
<https://cloud.google.com/vertex-ai/docs/model-monitoring/overview#considerations>

   upvoted 3 times

  **pikachu007** 9 months, 4 weeks ago

Selected Answer: D

Given the need to minimize costs while addressing changes in feature distributions and correlations, option D - "Use the features and the feature attributions for monitoring. Set a prediction-sampling-rate value that is closer to 0 than 1" seems to be a reasonable choice. This option allows monitoring both features and feature attributions, offering insights into changes in feature importance, while the lower prediction-sampling-rate helps manage costs by monitoring a subset of predictions. It's a trade-off between cost efficiency and the need for effective drift detection

   upvoted 2 times

  **b1a8fae** 10 months ago

Selected Answer: D

Not A. because higher monitoring frequency, higher cost.

Not B. because higher prediction request sample rate, higher cost.

Between the remaining 2, better to lower the prediction request sample rate so only a small fraction of the latest data is evaluated for drift, also because lots of data are expected so a small percentage should suffice to detect drift.

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