EXAM PROFESSIONAL MACHINE LEARNING ENGINEER TOPIC 1 QUESTION 227 DISCUSSI...

Actual exam question from Google's Professional Machine Learning Engineer
Question #: 227
Topic #: 1
[All Professional Machine Learning Engineer Questions]

You work at a bank. You need to develop a credit risk model to support loan application decisions. You decide to implement the model by using a neural network in TensorFlow. Due to regulatory requirements, you need to be able to explain the model's predictions based on its features. When the model is deployed, you also want to monitor the model's performance over time. You decided to use Vertex AI for both model development and deployment. What should you do?

A. Use Vertex Explainable AI with the sampled Shapley method, and enable Vertex AI Model Monitoring to check for feature distribution drift.

B. Use Vertex Explainable AI with the sampled Shapley method, and enable Vertex AI Model Monitoring to check for feature distribution skew.

C. Use Vertex Explainable AI with the XRAI method, and enable Vertex AI Model Monitoring to check for feature distribution drift.

D. Use Vertex Explainable AI with the XRAI method, and enable Vertex AI Model Monitoring to check for feature distribution skew.

Show Suggested Answer

by winston9 at *Jan. 10, 2024, 9:41 a.m.*

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b1a8fae Highly Voted 9 months, 3 weeks ago

Selected Answer: A

Not image -> not XRAI
Performance over time -> drift, not skew

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fitri001 Most Recent 6 months, 3 weeks ago

Selected Answer: A

why not the others?
B. Feature Distribution Skew: While skew can be relevant, drift is generally a more significant concern for credit risk models. Drift indicates a change in the underlying data distribution, potentially impacting model performance.
C & D. XRAI Method: XRAI (Explainable AI for Images) is specifically designed for interpreting image classification models. It wouldn't be the most effective choice for a neural network-based credit risk model working with tabular data.

upvoted 2 times

fitri001 6 months, 3 weeks ago

Vertex Explainable AI: This is a built-in Vertex AI feature that helps understand how features contribute to model predictions.
Sampled Shapley Method: This is a well-suited method for explaining complex models like neural networks. It provides insights into feature importance without requiring retraining the entire model.

upvoted 1 times

winston9 10 months ago

Selected Answer: A

Explainable AI with the XRAI method is for unstructured, image region analysis, in this case we use structured data for loan approval analysis.

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