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EXAM PROFESSIONAL MACHINE LEARNING ENGINEER TOPIC 1 QUESTION 250 DISCUSSI...

Actual exam question from Google's Professional Machine Learning Engineer
Question #: 250
Topic #: 1
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You work at an ecommerce startup. You need to create a customer churn prediction model. Your company's recent sales records are stored in a BigQuery table. You want to understand how your initial model is making predictions. You also want to iterate on the model as quickly as possible while minimizing cost. How should you build your first model?

A. Export the data to a Cloud Storage bucket. Load the data into a pandas DataFrame on Vertex AI Workbench and train a logistic regression model with scikit-learn.

B. Create a tf.data.Dataset by using the TensorFlow BigQueryClient. Implement a deep neural network in TensorFlow.

C. Prepare the data in BigQuery and associate the data with a Vertex AI dataset. Create an AutoMLTabularTrainingJob to tram a classification model.

D. Export the data to a Cloud Storage bucket. Create a tf.data.Dataset to read the data from Cloud Storage. Implement a deep neural network in TensorFlow.

Show Suggested Answer

by pikachu007 at *Jan. 13, 2024, 9:25 a.m.*

Comments

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PhilipKoku 4 months, 1 week ago

Selected Answer: C

C) Data preparation in BigQuery. Ease of implementation with AutoML

upvoted 4 times

fitri001 6 months, 1 week ago

Selected Answer: C

Cost-Effectiveness:
Leverages BigQuery for data storage and preprocessing, minimizing data movement costs.
Utilizes Vertex AI's AutoML Tabular training, which is a pay-per-use service, reducing upfront costs compared to custom training environments.
Rapid Iteration:
AutoML Tabular automates feature engineering and model selection, allowing you to experiment with various configurations quickly.
You can focus on refining feature engineering and interpreting model behavior based on AutoML's generated explanations.

upvoted 1 times

fitri001 6 months, 1 week ago

why not B?
Implementing a deep neural network from scratch requires significant development effort and might be overkill for an initial model. Interpretability of deep neural networks can also be challenging.
While TensorFlow BigQueryClient allows data access, it requires writing custom training scripts, increasing development time.

upvoted 1 times

omermahgoub 6 months, 1 week ago

Selected Answer: C

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upvoted 1 times

Carlose2108 8 months ago

Selected Answer: C

I went Option C

upvoted 1 times

pikachu007 9 months, 1 week ago

Selected Answer: C

Option A: While logistic regression is interpretable, manual training in Vertex AI Workbench adds time and complexity.
Options B and D: Deep neural networks can be powerful but often lack interpretability, making it challenging to understand model decisions. They also require more hands-on model development and infrastructure management.

upvoted 4 times

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