Welcome to ExamTopics

EXAMTOPICS
- Expert Verified, Online, Free.

MENU

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 255 DISCUSSI...

Actual exam question from Google's Professional Machine Learning Engineer
Question #: 255
Topic #: 1
[All Professional Machine Learning Engineer Questions]

You have recently used TensorFlow to train a classification model on tabular data. You have created a Dataflow pipeline that can transform several terabytes of data into training or prediction datasets consisting of TFRecords. You now need to productionize the model, and you want the predictions to be automatically uploaded to a BigQuery table on a weekly schedule. What should you do?

A. Import the model into Vertex AI and deploy it to a Vertex AI endpoint. On Vertex AI Pipelines, create a pipeline that uses the DataflowPythonJobOp and the ModelBacthPredictOp components.

B. Import the model into Vertex AI and deploy it to a Vertex AI endpoint. Create a Dataflow pipeline that reuses the data processing logic sends requests to the endpoint, and then uploads predictions to a BigQuery table.

C. Import the model into Vertex AI. On Vertex AI Pipelines, create a pipeline that uses the DataflowPythonJobOp and the ModelBatchPredictOp components.

D. Import the model into BigQuery. Implement the data processing logic in a SQL query. On Vertex AI Pipelines create a pipeline that uses the BigquervQueryJobOp and the BigqueryPredictModelJobOp components.

Show Suggested Answer

by pikachu007 at *Jan. 13, 2024, 3:26 p.m.*

Comments

Type your comment...

Submit

BlehMaks Highly Voted 8 months, 4 weeks ago

Selected Answer: C

The DataflowPythonJobOp operator lets you create a Vertex AI Pipelines component that prepares data by submitting a Python-based Apache Beam job to Dataflow for execution.
https://cloud.google.com/vertex-ai/docs/pipelines/dataflow-component#dataflowpythonjobop
Using we can specify an output location for Vertex AI to store predictions results
https://cloud.google.com/vertex-ai/docs/pipelines/batchprediction-component
A - is incorrect since we dont need an endpoint for batch predictions
B - creating a new Dataflow pipeline is redundant

upvoted 8 times

AK2020 Most Recent 2 months, 2 weeks ago

Selected Answer: B

Uploading predictions directly to BigQuery from the Dataflow pipeline integrates seamlessly with your data storage.

upvoted 1 times

AzureDP900 3 months, 2 weeks ago

B is right because
1)You've already trained a classification model using TensorFlow, so you need to productionize it by deploying it to a Vertex AI endpoint.
2)To automate the prediction process on a weekly schedule, you can create a Dataflow pipeline that reuses your existing data processing logic. This pipeline will send requests to the deployed model for inference and then upload the predicted results to BigQuery.

upvoted 1 times

Prakzz 3 months, 2 weeks ago

Selected Answer: B

Only option B talks about loading the data to BigQuery

upvoted 1 times

rcapj 4 months ago

B Vertex AI Deployment: Vertex AI provides a managed environment for deploying machine learning models. It simplifies the process and ensures scalability.
Dataflow Pipeline Reuse: Reusing the existing Dataflow pipeline for data processing leverages your existing code and avoids redundant logic.
Model Endpoint Predictions: Sending requests to the deployed model endpoint allows for efficient prediction generation.
BigQuery Upload: Uploading predictions directly to BigQuery from the Dataflow pipeline integrates seamlessly with your data storage.

upvoted 2 times

gscharly 6 months ago

Selected Answer: C

No need to deploy to endpoint as we need batch predictions. ModelBatchPredictOp can upload data to BQ. Dataflow pipeline logic can be implemented in DataflowPythonJobOp

upvoted 4 times

fitri001 6 months, 1 week ago

Selected Answer: B

TFRecords is a specific file format designed by TensorFlow for storing data in a way that's efficient for the machine learning framework. Here are some key points about TFRecords:

upvoted 1 times

fitri001 6 months, 1 week ago

Selected Answer: B

Option A: Vertex AI Pipelines' ModelBatchPredictOp is designed for batch prediction within pipelines, not for serving models through an endpoint.
Option C: Importing the model directly into BigQuery is not feasible for TensorFlow models.
Option D: Vertex AI Pipelines' BigqueryPredictModelJobOp assumes the model is already trained and hosted in BigQuery ML, which isn't the case here.

upvoted 2 times

pinimichele01 6 months, 1 week ago

Importing the model directly into BigQuery is not feasible for TensorFlow models. -> not true

upvoted 3 times

pinimichele01 6 months, 1 week ago

Selected Answer: C

ModelBatchPredictOp -> upload automatically on BQ
No need for endpoint

--> C

upvoted 2 times

pinimichele01 6 months, 2 weeks ago

Selected Answer: C

agree with BlehMaks

upvoted 1 times

pertoise 7 months, 3 weeks ago

Answer is C. No need for an endpoint here : Simply specify the BigQuery table URI in the ModelBatchPredictOp parameter and you're done automatically uploading to BigQuery

upvoted 3 times

guilhermebutzke 8 months, 1 week ago

Selected Answer: B

My Answer: B

The most complete answer, and reuse a created pipeline. Don’t make sense to use DataflowPythonJobOp when you have already created a dataflow pipeline that does the same.

upvoted 2 times

tavva_prudhvi 8 months, 2 weeks ago

Selected Answer: B

Not A, C as they does not explicitly mention how the predictions will be uploaded to BigQuery.

upvoted 1 times

daidai75 9 months ago

Selected Answer: B

The answer is B, optional A and B doesn't mention how to import prediction result to BigQuery.

upvoted 1 times

pikachu007 9 months, 1 week ago

Selected Answer: B

Option A: Vertex AI Pipelines are excellent for orchestrating ML workflows but might not be as efficient as Dataflow for large-scale data processing, especially with existing Dataflow logic.
Option C: While Vertex AI Pipelines can handle model loading and prediction, Dataflow is better suited for large-scale data processing and BigQuery integration.
Option D: BigQuery ML is primarily for in-database model training and prediction, not ideal for external models or large-scale data processing.

upvoted 1 times

Start Learning for free

Social Media

Facebook , Twitter
YouTube , Reddit
Pinterest

We are the biggest and most updated IT certification exam material website.

Using our own resources, we strive to strengthen the IT professionals community for free.

© 2024 ExamTopics

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.