

EXAMTOPICS

- Expert Verified, Online, Free.

≡ MENU



🔍 Google Discussions



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 95 DISCUSSIO..

Actual exam question from Google's Professional Machine Learning Engineer

Question #: 95

Topic #: 1

[\[All Professional Machine Learning Engineer Questions\]](#)

You are developing an ML model that uses sliced frames from video feed and creates bounding boxes around specific objects. You want to automate the following steps in your training pipeline: ingestion and preprocessing of data in Cloud Storage, followed by training and hyperparameter tuning of the object model using Vertex AI jobs, and finally deploying the model to an endpoint. You want to orchestrate the entire pipeline with minimal cluster management. What approach should you use?

- A. Use Kubeflow Pipelines on Google Kubernetes Engine.
- B. Use Vertex AI Pipelines with TensorFlow Extended (TFX) SDK.
- C. Use Vertex AI Pipelines with Kubeflow Pipelines SDK.
- D. Use Cloud Composer for the orchestration.


Show Suggested Answer

by  YangG at Dec. 13, 2022, 8:30 a.m.

Comments

Type your comment...

Submit

  **qaz09** Highly Voted  1 year, 8 months ago

From:

<https://cloud.google.com/vertex-ai/docs/pipelines/build-pipeline#sdk>

"1. If you use TensorFlow in an ML workflow that processes terabytes of structured data or text data, we recommend that you build your pipeline using TFX.

To learn more about building a TFX pipeline, follow the TFX getting started tutorials.

To learn more about using Vertex AI Pipelines to run a TFX pipeline, follow the TFX on Google Cloud tutorials.

2. For other use cases, we recommend that you build your pipeline using the Kubeflow Pipelines SDK. By building a pipeline with the Kubeflow Pipelines SDK, you can implement your workflow by building custom components or reusing prebuilt components, such as the Google Cloud Pipeline Components. Google Cloud Pipeline Components make it easier to use Vertex AI services like AutoML in your pipeline."

So I guess since it is image processing, it should be Kubeflow - answer C (TFX is for structured or text data).

   upvoted 11 times

  **baimus** 1 month, 2 weeks ago

TFX absolutely does support things other than structured and text datasets.



   upvoted 1 times

  **baimus** Most Recent  1 month, 2 weeks ago

Selected Answer: B

This question is designed to be TFX. It would be a weird thing to do to say "Vertex pipelines with kubeflow SDK" because that's just one of the ways to implement stuff in vertex pipelines, which it doesn't normally specify. TFX adds the things in the question on top of the functionality of Vertex.

   upvoted 1 times

  **San1111111111** 3 months ago

Selected Answer: B

minimal cluster management should rule out option c. why has everyone chosen that! it should be b

   upvoted 2 times

  **pawan94** 5 months, 2 weeks ago

You have to understand the ML lifecycle and difference between TFX and KFP better here. For ML end to end life cycle TFX is a better option, you can ensure Drift Detection/ Train Serve SKew with TFDV, you can easily perform serving with Tf.Serve and easily integrate TFX with Vertex AI pipeline which runs serverless. All these features are not directly available/managed in KFP (as its user centric and user managed library).

So I would go here with B.

   upvoted 3 times

  **pinimichele01** 6 months ago

Selected Answer: C

If you use TensorFlow in an ML workflow that processes terabytes of structured data or text data, should use TFX. For other use cases, Kubeflow. Link: <https://cloud.google.com/vertex-ai/docs/pipelines/build-pipeline>

   upvoted 1 times

  **Ulule** 7 months, 3 weeks ago

Selected Answer: B

Overall, using Vertex AI Pipelines with TensorFlow Extended (TFX) SDK provides a comprehensive and managed solution for handling video feed data in an ML pipeline, while minimizing the need for manual infrastructure management and maximizing scalability and efficiency.

   upvoted 2 times

  **vale_76_na_xxx** 10 months, 3 weeks ago

I vote for be. the question stated that the minimum clustering management is required, and I found this on the google study guide "Vertex AI Pipelines automatically provisions underlying infrastructure and managed it for you"

   upvoted 1 times

  **Mickey321** 11 months, 1 week ago

Selected Answer: B

minimal management

   upvoted 1 times

  **M25** 1 year, 5 months ago

Selected Answer: C

Went with C

   upvoted 1 times

  **tavva_prudhvi** 1 year, 7 months ago

Selected Answer: C



Vertex AI Pipelines with Kubeflow Pipelines SDK provides a high-level interface for building end-to-end machine learning pipelines. This approach allows for easy integration with Google Cloud services, including Cloud Storage for data ingestion and preprocessing, Vertex AI for training and hyperparameter tuning, and deployment to an endpoint. The Kubeflow Pipelines SDK also allows for easy orchestration of the entire pipeline, minimizing cluster management.

   upvoted 1 times

  **neochaotic** 1 year, 7 months ago

Answer is C. If you use TensorFlow in an ML workflow that processes terabytes of structured data or text data, should use TFX. For other use cases, Kubeflow. Link: <https://cloud.google.com/vertex-ai/docs/pipelines/build-pipeline>

   upvoted 1 times

  **TNT87** 1 year, 7 months ago

Selected Answer: C

Answer C...

<https://cloud.google.com/architecture/ml-on-gcp-best-practices#use-vertex-pipelines>

   upvoted 1 times

  **TNT87** 1 year, 6 months ago

<https://cloud.google.com/architecture/ml-on-gcp-best-practices#use-kubeflow-pipelines-sdk-for-flexible-pipeline-construction>

   upvoted 1 times

  **John_Pongthorn** 1 year, 8 months ago

Google want you to use core native service Pipeline, Don't overthink but , need to think it over.

The answer is in

<https://cloud.google.com/architecture/architecture-for-mlops-using-tfx-kubeflow-pipelines-and-cloud-build>

<https://cloud.google.com/vertex-ai/docs/pipelines>

   upvoted 2 times

  **zeic** 1 year, 9 months ago

Selected Answer: B

" You want to orchestrate the entire pipeline with minimal cluster management"

because of that it cant be answer c

i vote for b, because there is no cluster management with vertex ai

   upvoted 3 times

  **TNT87** 1 year, 5 months ago

nope, not correct

   upvoted 1 times




  **hiromi** 1 year, 10 months ago

Selected Answer: C

C

"If you are using other frameworks, we recommend using Kubeflow Pipeline, which is very flexible and allows you to use simple code to construct pipelines. Kubeflow Pipeline also provides Google Cloud pipeline components such as Vertex AI AutoML."

(Journey to Become a Google Cloud Machine Learning Engineer: Build the mind and hand of a Google Certified ML professional)

   upvoted 3 times

  **mil_spyro** 1 year, 10 months ago

Selected Answer: C

vote C

   upvoted 1 times

  **mil_spyro** 1 year, 10 months ago

I vote C.

<https://cloud.google.com/vertex-ai/docs/pipelines/build-pipeline>

   upvoted 1 times

[Load full discussion...](#)

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.