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Exam Professional Machine Learning Engineer All Questions

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EXAM PROFESSIONAL MACHINE LEARNING ENGINEER TOPIC 1 QUESTION 260 DISCUSSI...

Actual exam question from Google's Professional Machine Learning Engineer

Question #: 260

Topic #: 1

[All Professional Machine Learning Engineer Questions]

You are developing a model to predict whether a failure will occur in a critical machine part. You have a dataset consisting of a multivariate time series and labels indicating whether the machine part failed. You recently started experimenting with a few different preprocessing and modeling approaches in a Vertex Al Workbench notebook. You want to log data and track artifacts from each run. How should you set up your experiments?

- A. 1. Use the Vertex AI SDK to create an experiment and set up Vertex ML Metadata.
- 2. Use the log_time_series_metrics function to track the preprocessed data, and use the log_merrics function to log loss values.
- B. 1. Use the Vertex AI SDK to create an experiment and set up Vertex ML Metadata.
- 2. Use the log_time_series_metrics function to track the preprocessed data, and use the log_metrics function to log loss values.
- C. 1. Create a Vertex AI TensorBoard instance and use the Vertex AI SDK to create an experiment and associate the TensorBoard instance.
- 2. Use the assign_input_artifact method to track the preprocessed data and use the log_time_series_metrics function to log loss values.
- D. 1. Create a Vertex AI TensorBoard instance, and use the Vertex AI SDK to create an experiment and associate the TensorBoard instance.
- 2. Use the log_time_series_metrics function to track the preprocessed data, and use the log_metrics function to log loss values.

Snow Suggested Answer

by A winston9 at Jan. 16, 2024, 2:23 p.m.

Comments

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□ ♣ Dirtie_Sinkie 1 month ago

Selected Answer: C

C sounds more correct



🗖 🏜 tungdeptraigua 3 months ago

Selected Answer: B

A and B are the same

👍 🤚 🎮 upvoted 1 times

🗏 🌡 fitri001 5 months, 4 weeks ago

Selected Answer: B

Vertex AI Experiment and ML Metadata: This is the foundation for tracking experiments and artifacts within Vertex AI.expand_more Creating an experiment allows you to group related runs and log data associated with those runs. ML Metadata helps manage the lineage of data and models used in your experiments.expand_more

Logging Data:

log_time_series_metrics: This function is specifically designed for tracking time-series data, making it suitable for logging the preprocessed multivariate time series data in your experiment.

log_metrics: This function is appropriate for logging loss values during model training. It can handle numerical values like loss efficiently.

By combining these techniques, you can effectively track both the preprocessed data (time series) and the training performance metrics (loss values) within your Vertex AI Experiment.

upvoted 4 times

= 4 fitri001 5 months, 4 weeks ago

Option A: It lacks the functionality to log preprocessed data (no log_time_series_metrics).

Option C and D: While TensorBoard can be used for visualization, it's not directly related to logging data within Vertex AI Experiments.

pen spark

exclamation Additionally, assign_input_artifact isn't the correct method for logging time series data

👆 📁 upvoted 2 times

☐ ♣ gscharly 6 months ago

Selected Answer: C

log_time_series_metrics requires setting Tensorboard: https://cloud.google.com/vertex-ai/docs/experiments/log-data

assign_input_artifacts can be used to track input data: https://github.com/GoogleCloudPlatform/vertex-aisamples/blob/main/notebooks/official/experiments/get_started_with_vertex_experiments.ipynb

upvoted 4 times

■ omermahgoub 6 months, 1 week ago

Selected Answer: B

Why B?

- 1. Experiment Creation: Vertex AI SDK establishes a context for grouping your training runs and facilitates experiment management.
- 2. By setting up Vertex ML Metadata (only can be done when creating an experiment with the Vertex AI SDK), you enable tracking of artifacts and metrics associated with each experiment run.
- 3. log_time_series_metrics function is well-suited for tracking the preprocessed multivariate time series data associated with each experiment run. This allows you to analyze how preprocessing impacts model performance.
- upvoted 2 times
- Yan_X 6 months, 3 weeks ago

Selected Answer: B

The assign_input_artifacts method is used to associate input artifacts with an experiment, that is not used for log time series and labels.

A and B is just with a minor typo (metric vs merric), so select B.



upvoted 2 times

guilhermebutzke 8 months, 1 week ago

Selected Answer: C

My Answer: C

assign input artifact method is a method to Vertex Ai Experiment to track the preprocessed data while log time series metrics is a function of Vertex AI TensorBoard to log metrics along time.

look:

https://github.com/GoogleCloudPlatform/vertex-ai-

samples/blob/main/notebooks/official/experiments/build_model_experimentation_lineage_with_prebuild_code.ipynb

https://github.com/GoogleCloudPlatform/vertex-ai-

samples/blob/main/notebooks/official/experiments/comparing_local_trained_models.ipynb





upvoted 1 times

😑 🏜 b1a8fae 9 months ago

Selected Answer: C

C.

Tensorboard for experimentation and comparison of different model runs.

assign input artifacts to track preprocessed data, since it links artifacts as inputs to the execution.

https://cloud.google.com/python/docs/reference/aiplatform/latest/google.cloud.aiplatform.Execution#google cloud aiplatform Ex ecution assign input artifacts

Using log time series metrics would make sense if what we were doing is logging a metric, which we aren't when we track the preprocessed data not yet ran by the model.

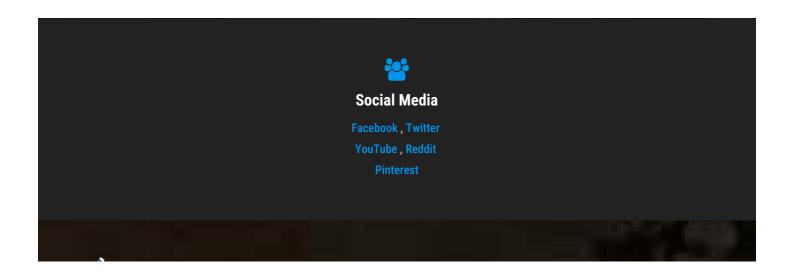


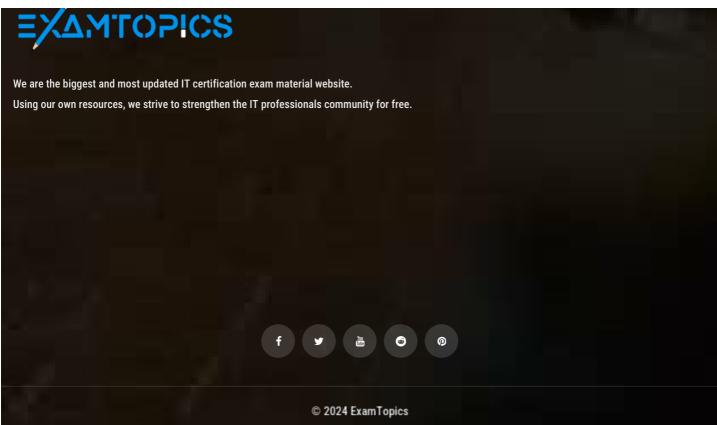




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