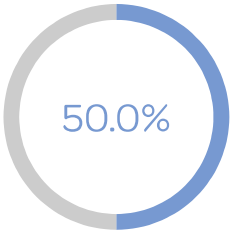

Great Start!

You did not pass the challenge on this attempt. This challenge is now locked and can be unlocked by using gems or by completing all of the recommended activities.

This challenge is now locked.

Unlock **0**

Linux Academy

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Report Card

Expectations	Score
1. Google Cloud Data Engineer - Machine Learning	50 %

Exam Breakdown

Google Cloud Data Engineer - Machine Learning

1. Why would you want to train a machine learning model locally before deploying to Cloud ML Engine? (Choose all that apply)

A. Lower cost	✓ **Correct**
Why is this correct? Making sure a model is ready before running it on a cloud resource saves money. https://linuxacademy.com/cp/courses/lesson/course/2247/lesson/1/module/208 (https://linuxacademy.com/cp/courses/lesson/course/2247/lesson/1/module/208)	
B. Better security	✗ **Your Answer**
Why is this incorrect? Both working locally and on the cloud are equally secure when configured correctly. https://linuxacademy.com/cp/courses/lesson/course/2247/lesson/1/module/208 (https://linuxacademy.com/cp/courses/lesson/course/2247/lesson/1/module/208)	
C. Quick iteration	✓ **Correct**
D. Better scaling	

2. What is a difference between example (training) data and test data?

A. Examples are used for feature engineering, and test data is used for hyperparameter tuning.
B. Examples are used to validate training models, and test data is used to train the learning model.

C. Test data have labels attached and examples do not.

D. Example (training) data uses its labels to train the machine learning model, while test data uses its labels to validate the model's accuracy. ✓ **Correct**

3. What software libraries does Cloud ML Engine support? (choose all that apply)

A. Tensorflow ✓ **Correct**

B. Tensorflow and PyTorch ✕ **Your Answer**

Why is this incorrect?
Currently, only Tensorflow is supported. XGBoost and scikit-learn are currently in beta (as of this course creation date).
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C. Theano and PyTorch

D. XGBoost ✓ **Correct**

Why is this correct?
Currently, only Tensorflow is supported. XGBoost and scikit-learn are currently in beta (as of this course creation date).
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4.

When developing your machine learning model, you need to tune your hyperparameters. Which of these answers are examples of hyperparameters? (Choose all that apply)

A. Hidden layers — ✓ **Correct**

Why is this correct?
Hidden layers are a hyperparameter, which adjusts the training model itself.
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(https://linuxacademy.com/cp/courses/lesson/course/2246/lesson/2/module/208)

B. Weights — ✗ **Your Answer**

Why is this incorrect?
Weights are a parameter, which is an adjustment on the training data, not the training model itself.
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(https://linuxacademy.com/cp/courses/lesson/course/2246/lesson/2/module/208)

C. Biases — ✗ **Your Answer**

Why is this incorrect?
Biases are a parameter, which is an adjustment on the training data, not the training model itself.
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(https://linuxacademy.com/cp/courses/lesson/course/2246/lesson/2/module/208)

D. Learning rate — ✓ **Correct**

Why is this correct?
Learning rate is a hyperparameter, which adjusts the training model itself.
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(https://linuxacademy.com/cp/courses/lesson/course/2246/lesson/2/module/208)

5. What is a deep neural network?

A. An increasingly complex algorithm compared to a simple algorithm network	
B. A neural network with (generally) at least 3 hidden layers	✓ **Correct**
C. A neural network with a single hidden layer, but with at least 10 neurons	
D. A neural network with many features in use	

6. What happens if you do not maintain separate test and training data for your learning model?

A. Your hyperparameters will not be correctly calibrated.	
B. The neural network will not have enough data to work with.	
C. The learning model will test better on the larger, combined set of data.	
D. Your model will only be trained on the specific training data and nothing else, known as overfitting.	✓ **Correct**

7. To run a local training job using the Google Cloud SDK, what command would you run?

A. gcloud ml-engine jobs submit training --local	✕ **Your Answer**

Why is this incorrect?
This is not a valid command.
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B. gcloud ml-engine job submit local

C. gcloud ml-engine local train ✓ **Correct**

Why is this correct?
This is the correct command to train locally.
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(https://linuxacademy.com/cp/courses/lesson/course/2247/lesson/2/module/208)

D. You cannot use the Google Cloud SDK for local training.

8. You are developing an application that will process thousands of images and scan for explicit content. You need to develop your learning model quickly, and are not familiar with working in Tensorflow. How can you complete this task as quickly as possible while saving on costs?

A. Have your application call on the Cloud Vision API and pass your images to it via a Cloud Storage URI. ✓ **Correct**

B. Use Cloud Datalab to develop your learning model in an interactive format, to make the process easier.

C. Develop your training model in Cloud ML Engine, then have your application call on the trained model.

D. Hire a consultant to assist with training your machine learning model to process your images.