aws training and certification

You reached the end of this quiz.

Below you can see your overall score, as well as how you scored on each question. **A detailed explanation of each answer will be provided to you in a practice question solutions page that you will gain access to by the end of this course.**

5/6 **83.3%**

A real estate company wants to provide its customers with a more accurate prediction of the final sale price for houses they are considering in various cities. To do this, the company wants to use a fully connected neural network trained on data from the previous ten years of home sales, as well as other features. **1/1**

What kind of machine learning problem does this situation represent?

- Recommender system
- Classification
- ✓ **Regression**
- Reinforcement learning

A manufacturing company wants to increase the longevity of its factory machines by predicting when a machine part is about to stop working, jeopardizing the health of the machine. The company's team of Data Scientists will build an ML model to accomplish this goal. The model will be trained on data made up of consumption metrics from similar factory machines, and will span a time frame from one hour before a machine part broke down to five minutes after the part degraded. **0/1**

What kind of machine learning algorithm should the company use to build this model?

- ✗ **Scikit Learn Random Forest**
- Amazon SageMaker DeepAR
- SciKit Learn Regression
- Convolutional neural network (CNN)

A Data Scientist working for an autonomous vehicle company is building an ML model to detect and label people and various objects (for instance, cars and traffic signs) that may be encountered on a street. The Data Scientist has a dataset made up of labeled images, which will be used to train their machine learning model. **1/1**

What kind of ML algorithm should be used?

- Semantic segmentation
- Image localization
- ✓ **Instance segmentation**
- Image classification

A Data Scientist is training a convolutional neural network model to detect incoming employees at the company's front gate using a camera so that the system opens for them automatically. However, the model is taking too long to converge and the error oscillates for more than 10 epochs. **2/2**

What should the Data Scientist do to improve upon this situation? (Select TWO.)

- ✓ **Normalize the images before training**
- ✓ **Add batch normalization**
- Increase batch size
- Decrease weight decay
- Add more epochs

A Data Scientist at a waste recycling company trained a CNN model to classify waste at the company's sites. Incoming waste was classified as either trash, compost, or recyclable to make it easier for the machines to split the incoming waste into the appropriate bins.

1/1

During model testing, the F1 score was 0.918. The company's senior leadership originally asked the Data Scientist to reach an F1 score of at least 0.95.

What should the Data Scientist do to improve this score without spending too much time optimizing the model?

- ✓ **Use Amazon SageMaker tuning jobs to tune the hyperparameters used**
- Run the Amazon SageMaker training job for more epochs
- Use momentum to improve the training in the Amazon SageMaker training job
- Increase the batch size to improve the score in the Amazon SageMaker training job