

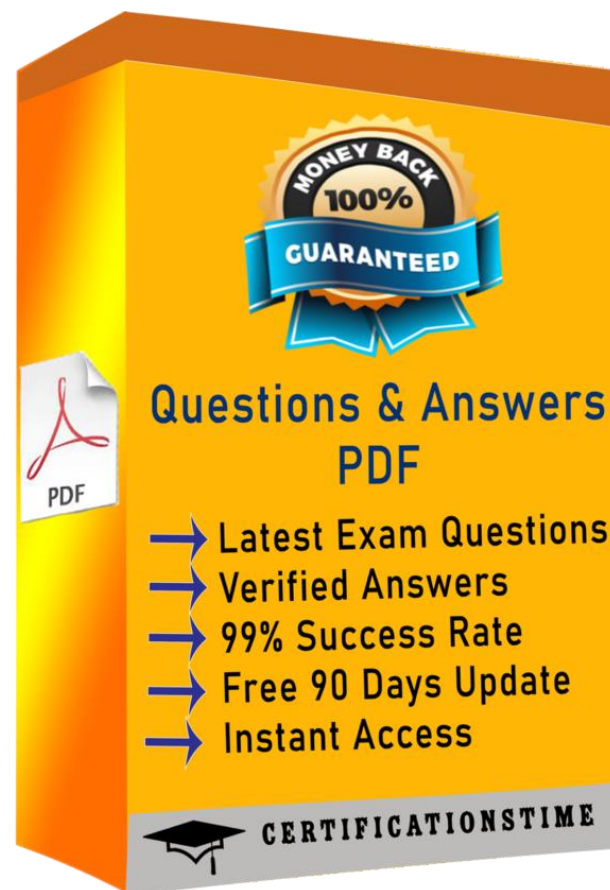


Amazon

Exam Questions MLS-C01

**AWS Certified Machine
Learning – Specialty**

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QUESTION 1

A Machine Learning Specialist observes several performance problems with the training portion of a machine learning solution on Amazon SageMaker. The solution uses a large training dataset 2 TB in size and is using the SageMaker k-means algorithm. The observed issues include the unacceptable length of time it takes before the training job launches and poor I/O throughput while training the model. What should the Specialist do to address the performance issues with the current solution?

- A. Use the SageMaker batch transform feature
- B. Compress the training data into Apache Parquet format.
- C. Ensure that the input mode for the training job is set to Pipe.
- D. Copy the training dataset to an Amazon EFS volume mounted on the SageMaker instance.

Correct Answer: B

QUESTION 2

A Machine Learning Specialist is building a logistic regression model that will predict whether or not a person will order a pizza. The Specialist is trying to build the optimal model with an ideal classification threshold. What model evaluation technique should the Specialist use to understand how different classification thresholds will impact the model's performance?

- A. Receiver operating characteristic (ROC) curve
- B. Misclassification rate
- C. Root Mean Square Error (RMSE)
- D. L1 norm

Correct Answer: A

QUESTION 3

A Machine Learning Specialist built an image classification deep learning model. However, the Specialist ran into an overfitting problem in which the training and testing accuracies were 99% and 75% respectively. How should the Specialist address this issue and what is the reason behind it?

- A. The learning rate should be increased because the optimization process was trapped at a local minimum.
- B. The dropout rate at the flatten layer should be increased because the model is not generalized enough.
- C. The dimensionality of the dense layer next to the flatten layer should be increased because the model is not complex enough.
- D. The epoch number should be increased because the optimization process was terminated before it reached the global minimum.

Correct Answer: D

QUESTION 4

A Machine Learning team uses Amazon SageMaker to train an Apache MXNet handwritten digit classifier model using a research dataset. The team wants to receive a notification when the model is overfitting. Auditors want to view the Amazon SageMaker log activity report to ensure there are no unauthorized API calls. What should the Machine Learning team do to address the requirements with the least amount of code and fewest steps?

- A. Implement an AWS Lambda function to log Amazon SageMaker API calls to Amazon S3. Add code to push a custom metric to Amazon CloudWatch. Create an alarm in CloudWatch with Amazon SNS to receive a notification when the model is overfitting.
- B. Use AWS CloudTrail to log Amazon SageMaker API calls to Amazon S3. Add code to push a custom metric to Amazon CloudWatch. Create an alarm in CloudWatch with Amazon SNS to receive a notification when the model is overfitting.
- C. Implement an AWS Lambda function to log Amazon SageMaker API calls to AWS CloudTrail. Add code to push a custom metric to Amazon CloudWatch. Create an alarm in CloudWatch with Amazon SNS to receive a notification when the model is overfitting.
- D. Use AWS CloudTrail to log Amazon SageMaker API calls to Amazon S3. Set up Amazon SNS to receive a notification when the model is overfitting.

Correct Answer: C

QUESTION 5



A large consumer goods manufacturer has the following products on sale

- 34 different toothpaste variants
- 48 different toothbrush variants
- 43 different mouthwash variants

The entire sales history of all these products is available in Amazon S3. Currently, the company is using

custom-built autoregressive integrated moving average (ARIMA) models to forecast demand for these products. The company wants to predict the demand for a new product that will soon be launched.

Which solution should a Machine Learning Specialist apply?

- A. Train a custom ARIMA model to forecast demand for the new product.
- B. Train an Amazon SageMaker DeepAR algorithm to forecast demand for the new product.
- C. Train an Amazon SageMaker k-means clustering algorithm to forecast demand for the new product.
- D. Train a custom XGBoost model to forecast demand for the new product.

Correct Answer: B

Explanation/Reference:

The Amazon SageMaker DeepAR forecasting algorithm is a supervised learning algorithm for forecasting scalar (one-dimensional) time series using recurrent neural networks (RNN). Classical forecasting methods, such as autoregressive integrated moving average (ARIMA) or exponential smoothing (ETS), fit a single model to each individual time series. They then use that model to extrapolate the time series into the future.

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