MLS-C01 Dumps

AWS Certified Machine Learning - Specialty

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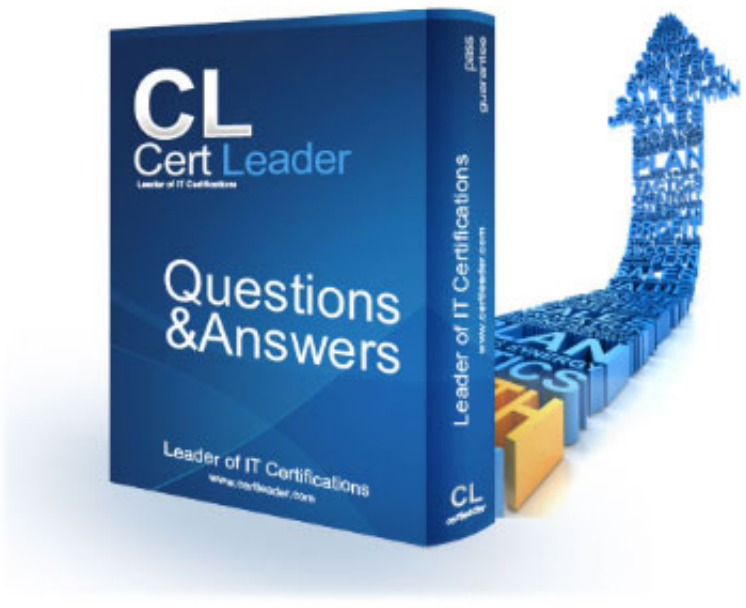

NEW QUESTION 1
A Machine Learning Specialist at a company sensitive to security is preparing a dataset for model training. The dataset is stored in Amazon S3 and contains Personally Identifiable Information (Pll). The dataset:
* Must be accessible from a VPC only.
* Must not traverse the public internet. How can these requirements be satisfied?

A. Create a VPC endpoint and apply a bucket access policy that restricts access to the given VPC endpoint and the VPC.
B. Create a VPC endpoint and apply a bucket access policy that allows access from the given VPC endpoint and an Amazon EC2 instance.
C. Create a VPC endpoint and use Network Access Control Lists (NACLs) to allow traffic between only the given VPC endpoint and an Amazon EC2 instance.
D. Create a VPC endpoint and use security groups to restrict access to the given VPC endpoint and an Amazon EC2 instance.

Answer: B

NEW QUESTION 2
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%r 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 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.

Answer: D

NEW QUESTION 3
A Data Science team within a large company uses Amazon SageMaker notebooks to access data stored in Amazon S3 buckets. The IT Security team is concerned that internet-enabled notebook instances create a security vulnerability where malicious code running on the instances could compromise data privacy. The company mandates that all instances stay within a secured VPC with no internet access, and data communication traffic must stay within the AWS network. How should the Data Science team configure the notebook instance placement to meet these requirements?

A. Associate the Amazon SageMaker notebook with a private subnet in a VP
B. Place the Amazon SageMaker endpoint and S3 buckets within the same VPC.
C. Associate the Amazon SageMaker notebook with a private subnet in a VP
D. Use 1AM policies to grant access to Amazon S3 and Amazon SageMaker.
E. Associate the Amazon SageMaker notebook with a private subnet in a VP
F. Ensure the VPC has S3 VPC endpoints and Amazon SageMaker VPC endpoints attached to it.
G. Associate the Amazon SageMaker notebook with a private subnet in a VP
H. Ensure the VPC has a NAT gateway and an associated security group allowing only outbound connections to Amazon S3 and Amazon SageMaker

Answer: D

NEW QUESTION 4
A Machine Learning Specialist wants to determine the appropriate SageMakerVariant Invocations Per Instance setting for an endpoint automatic scaling configuration. The Specialist has performed a load test on a single instance and determined that peak requests per second (RPS) without service degradation is about 20 RPS As this is the first deployment, the Specialist intends to set the invocation safety factor to 0 5
Based on the stated parameters and given that the invocations per instance setting is measured on a per-minute basis, what should the Specialist set as the sageMakervariantinvocationsPerinstance setting?

A. 10
B. 30
C. 600
D. 2,400

Answer: C

NEW QUESTION 5
A Machine Learning Specialist was given a dataset consisting of unlabeled data The Specialist must create a model that can help the team classify the data into different buckets What model should be used to complete this work?

A. K-means clustering
B. Random Cut Forest (RCF)
C. XGBoost
D. BlazingText

Answer: A

NEW QUESTION 6
A Machine Learning Specialist is working for a credit card processing company and receives an unbalanced dataset containing credit card transactions. It contains 99,000 valid transactions and 1,000 fraudulent transactions The Specialist is asked to score a model that was run against the dataset The Specialist has been advised that identifying valid transactions is equally as important as identifying fraudulent transactions What metric is BEST suited to score the model?

A. Precision
B. Recall
C. Area Under the ROC Curve (AUC)
D. Root Mean Square Error (RMSE)

Answer: A

NEW QUESTION 7
While working on a neural network project, a Machine Learning Specialist discovers thai some features in the data have very high magnitude resulting in this data being weighted more in the cost function What should the Specialist do to ensure better convergence during backpropagation?

A. Dimensionality reduction
B. Data normalization
C. Model regulanzation
D. Data augmentation for the minority class

Answer: D

NEW QUESTION 8
A company is running a machine learning prediction service that generates 100 TB of predictions every day A Machine Learning Specialist must generate a visualization of the daily precision-recall curve from the predictions, and forward a read-only version to the Business team.
Which solution requires the LEAST coding effort?

A. Run a daily Amazon EMR workflow to generate precision-recall data, and save the results in Amazon S3 Give the Business team read-only access to S3
B. Generate daily precision-recall data in Amazon QuickSight, and publish the results in a dashboard shared with the Business team
C. Run a daily Amazon EMR workflow to generate precision-recall data, and save the results in Amazon S3 Visualize the arrays in Amazon QuickSight, and publish them in a dashboard shared with the Business team
D. Generate daily precision-recall data in Amazon ES, and publish the results in a dashboard shared with the Business team.

Answer: C

NEW QUESTION 9
A Machine Learning Specialist is packaging a custom ResNet model into a Docker container so the company can leverage Amazon SageMaker for training The Specialist is using Amazon EC2 P3 instances to train the model and needs to properly configure the Docker container to leverage the NVIDIA GPUs
What does the Specialist need to do1?

A. Bundle the NVIDIA drivers with the Docker image
B. Build the Docker container to be NVIDIA-Docker compatible
C. Organize the Docker container's file structure to execute on GPU instances.
D. Set the GPU flag in the Amazon SageMaker Create TrainingJob request body

Answer: A

NEW QUESTION 10
An office security agency conducted a successful pilot using 100 cameras installed at key locations within the main office. Images from the cameras were uploaded to Amazon S3 and tagged using Amazon Rekognition, and the results were stored in Amazon ES. The agency is now looking to expand the pilot into a full production system using thousands of video cameras in its office locations globally. The goal is to identify activities performed by non-employees in real time.
Which solution should the agency consider?

A. Use a proxy server at each local office and for each camera, and stream the RTSP feed to a uniqueAmazon Kinesis Video Streams video strea
B. On each stream, use Amazon Rekognition Video and createa stream processor to detect faces from a collection of known employees, and alert when non-employees are detected.
C. Use a proxy server at each local office and for each camera, and stream the RTSP feed to a uniqueAmazon Kinesis Video Streams video strea
D. On each stream, use Amazon Rekognition Image to detectfaces from a collection of known employees and alert when non-employees are detected.
E. Install AWS DeepLens cameras and use the DeepLens_Kinesis_Video module to stream video to Amazon Kinesis Video Streams for each camer
F. On each stream, use Amazon Rekognition Video and create a stream processor to detect faces from a collection on each stream, and alert when nonemployees are detected.
G. Install AWS DeepLens cameras and use the DeepLens_Kinesis_Video module to stream video to Amazon Kinesis Video Streams for each camer
H. On each stream, run an AWS Lambda function to capture image fragments and then call Amazon Rekognition Image to detect faces from a collection of known employees, and alert when non-employees are detected.

Answer: D

NEW QUESTION 10
A company is running an Amazon SageMaker training job that will access data stored in its Amazon S3 bucket A compliance policy requires that the data never be transmitted across the internet How should the company set up the job?

A. Launch the notebook instances in a public subnet and access the data through the public S3 endpoint
B. Launch the notebook instances in a private subnet and access the data through a NAT gateway
C. Launch the notebook instances in a public subnet and access the data through a NAT gateway
D. Launch the notebook instances in a private subnet and access the data through an S3 VPC endpoint.

Answer: D

NEW QUESTION 15
A Machine Learning Specialist is building a model to predict future employment rates based on a wide range of economic factors While exploring the data, the Specialist notices that the magnitude of the input features vary greatly The Specialist does not want variables with a larger magnitude to dominate the model
What should the Specialist do to prepare the data for model training'?

A. Apply quantile binning to group the data into categorical bins to keep any relationships in the data by replacing the magnitude with distribution
B. Apply the Cartesian product transformation to create new combinations of fields that are independent of the magnitude
C. Apply normalization to ensure each field will have a mean of 0 and a variance of 1 to remove any significant magnitude

D. Apply the orthogonal sparse Diagram (OSB) transformation to apply a fixed-size sliding window to generate new features of a similar magnitude.

Answer: C

NEW QUESTION 17
A retail chain has been ingesting purchasing records from its network of 20,000 stores to Amazon S3 using Amazon Kinesis Data Firehose To support training an improved machine learning model, training records will require new but simple transformations, and some attributes will be combined The model needs lo be retrained daily
Given the large number of stores and the legacy data ingestion, which change will require the LEAST amount of development effort?

A. Require that the stores to switch to capturing their data locally on AWS Storage Gateway for loading into Amazon S3 then use AWS Glue to do the transformation
B. Deploy an Amazon EMR cluster running Apache Spark with the transformation logic, and have the cluster run each day on the accumulating records in Amazon S3, outputting new/transformed records to Amazon S3
C. Spin up a fleet of Amazon EC2 instances with the transformation logic, have them transform the data records accumulating on Amazon S3, and output the transformed records to Amazon S3.
D. Insert an Amazon Kinesis Data Analytics stream downstream of the Kinesis Data Firehouse stream that transforms raw record attributes into simple transformed values using SQL.

Answer: D

NEW QUESTION 19
A Machine Learning Specialist is building a supervised model that will evaluate customers' satisfaction with their mobile phone service based on recent usage The model's output should infer whether or not a customer is likely to switch to a competitor in the next 30 days
Which of the following modeling techniques should the Specialist use1?

A. Time-series prediction
B. Anomaly detection
C. Binary classification
D. Regression

Answer: D

NEW QUESTION 22
An employee found a video clip with audio on a company's social media feed. The language used in the video is Spanish. English is the employee's first language, and they do not understand Spanish. The employee wants to do a sentiment analysis.
What combination of services is the MOST efficient to accomplish the task?

A. Amazon Transcribe, Amazon Translate, and Amazon Comprehend
B. Amazon Transcribe, Amazon Comprehend, and Amazon SageMaker seq2seq
C. Amazon Transcribe, Amazon Translate, and Amazon SageMaker Neural Topic Model (NTM)
D. Amazon Transcribe, Amazon Translate, and Amazon SageMaker BlazingText

Answer: C

NEW QUESTION 25
A Machine Learning Specialist is building a model that will perform time series forecasting using Amazon SageMaker The Specialist has finished training the model and is now planning to perform load testing on the endpoint so they can configure Auto Scaling for the model variant
Which approach will allow the Specialist to review the latency, memory utilization, and CPU utilization during the load test"?

A. Review SageMaker logs that have been written to Amazon S3 by leveraging Amazon Athena and Amazon OuickSight to visualize logs as they are being produced
B. Generate an Amazon CloudWatch dashboard to create a single view for the latency, memory utilization,and CPU utilization metrics that are outputted by Amazon SageMaker
C. Build custom Amazon CloudWatch Logs and then leverage Amazon ES and Kibana to query and visualize the data as it is generated by Amazon SageMaker
D. Send Amazon CloudWatch Logs that were generated by Amazon SageMaker lo Amazon ES and use Kibana to query and visualize the log data.

Answer: B

NEW QUESTION 30
A Machine Learning Specialist works for a credit card processing company and needs to predict which transactions may be fraudulent in near-real time. Specifically, the Specialist must train a model that returns the probability that a given transaction may be fraudulent
How should the Specialist frame this business problem'?

A. Streaming classification
B. Binary classification
C. Multi-category classification
D. Regression classification

Answer: A

NEW QUESTION 32
A Machine Learning Specialist must build out a process to query a dataset on Amazon S3 using Amazon Athena The dataset contains more than 800.000 records stored as plaintext CSV files Each record contains 200 columns and is approximately 1 5 MB in size Most queries will span 5 to 10 columns only
How should the Machine Learning Specialist transform the dataset to minimize query runtime?

A. Convert the records to Apache Parquet format

B. Convert the records to JSON format
C. Convert the records to GZIP CSV format
D. Convert the records to XML format

Answer: A

NEW QUESTION 37
A company is observing low accuracy while training on the default built-in image classification algorithm in Amazon SageMaker. The Data Science team wants to use an Inception neural network architecture instead of a ResNet architecture.
Which of the following will accomplish this? (Select TWO.)

A. Customize the built-in image classification algorithm to use Inception and use this for model training.
B. Create a support case with the SageMaker team to change the default image classification algorithm to Inception.
C. Bundle a Docker container with TensorFlow Estimator loaded with an Inception network and use this for model training.
D. Use custom code in Amazon SageMaker with TensorFlow Estimator to load the model with an Inception network and use this for model training.
E. Download and apt-get install the inception network code into an Amazon EC2 instance and use this instance as a Jupyter notebook in Amazon SageMaker.

Answer: AD

NEW QUESTION 38
A Machine Learning Specialist needs to be able to ingest streaming data and store it in Apache Parquet files for exploration and analysis. Which of the following services would both ingest and store this data in the correct format?

A. AWSDMS
B. Amazon Kinesis Data Streams
C. Amazon Kinesis Data Firehose
D. Amazon Kinesis Data Analytics

Answer: C

NEW QUESTION 43
A Machine Learning Specialist needs to create a data repository to hold a large amount of time-based training data for a new model. In the source system, new files are added every hour Throughout a single 24-hour period, the volume of hourly updates will change significantly. The Specialist always wants to train on the last 24 hours of the data
Which type of data repository is the MOST cost-effective solution?

A. An Amazon EBS-backed Amazon EC2 instance with hourly directories
B. An Amazon RDS database with hourly table partitions
C. An Amazon S3 data lake with hourly object prefixes
D. An Amazon EMR cluster with hourly hive partitions on Amazon EBS volumes

Answer: C

NEW QUESTION 45
A Machine Learning Specialist is working with a large cybersecurily company that manages security events in real time for companies around the world The cybersecurity company wants to design a solution that will allow it to use machine learning to score malicious events as anomalies on the data as it is being ingested The company also wants be able to save the results in its data lake for later processing and analysis
What is the MOST efficient way to accomplish these tasks'?

A. Ingest the data using Amazon Kinesis Data Firehose, and use Amazon Kinesis Data Analytics Random Cut Forest (RCF) for anomaly detection Then use Kinesis Data Firehose to stream the results to Amazon S3
B. Ingest the data into Apache Spark Streaming using Amazon EM
C. and use Spark MLlib with k-means to perform anomaly detection Then store the results in an Apache Hadoop Distributed File System (HDFS) using Amazon EMR with a replication factor of three as the data lake
D. Ingest the data and store it in Amazon S3 Use AWS Batch along with the AWS Deep Learning AMIs to train a k-means model using TensorFlow on the data in Amazon S3.
E. Ingest the data and store it in Amazon S3. Have an AWS Glue job that is triggered on demand transform the new data Then use the built-in Random Cut Forest (RCF) model within Amazon SageMaker to detect anomalies in the data

Answer: B

NEW QUESTION 46
A manufacturing company has structured and unstructured data stored in an Amazon S3 bucket A Machine Learning Specialist wants to use SQL to run queries on this data. Which solution requires the LEAST effort to be able to query this data?

A. Use AWS Data Pipeline to transform the data and Amazon RDS to run queries.
B. Use AWS Glue to catalogue the data and Amazon Athena to run queries
C. Use AWS Batch to run ETL on the data and Amazon Aurora to run the quenes
D. Use AWS Lambda to transform the data and Amazon Kinesis Data Analytics to run queries

Answer: D

NEW QUESTION 48
An Amazon SageMaker notebook instance is launched into Amazon VPC The SageMaker notebook references data contained in an Amazon S3 bucket in another account The bucket is encrypted using SSE-KMS The instance returns an access denied error when trying to access data in Amazon S3.
Which of the following are required to access the bucket and avoid the access denied error? (Select THREE)

A. An AWS KMS key policy that allows access to the customer master key (CMK)
B. A SageMaker notebook security group that allows access to Amazon S3
C. An 1AM role that allows access to the specific S3 bucket
D. A permissive S3 bucket policy
E. An S3 bucket owner that matches the notebook owner
F. A SegaMaker notebook subnet ACL that allow traffic to Amazon S3.

Answer: ACF

NEW QUESTION 50
For the given confusion matrix, what is the recall and precision of the model?

		Actual	
		Yes	No
Predicted	Yes	12	3
	No	1	9

A. Recall = 0.92 Precision = 0.84
B. Recall = 0.84 Precision = 0.8
C. Recall = 0.92 Precision = 0.8
D. Recall = 0.8 Precision = 0.92

Answer: A

NEW QUESTION 55
A Machine Learning Specialist is assigned a TensorFlow project using Amazon SageMaker for training, and needs to continue working for an extended period with no Wi-Fi access.
Which approach should the Specialist use to continue working?

A. Install Python 3 and boto3 on their laptop and continue the code development using that environment.
B. Download the TensorFlow Docker container used in Amazon SageMaker from GitHub to their local environment, and use the Amazon SageMaker Python SDK to test the code.
C. Download TensorFlow from tensorflow.org to emulate the TensorFlow kernel in the SageMaker environment.
D. Download the SageMaker notebook to their local environment then install Jupyter Notebooks on their laptop and continue the development in a local notebook.

Answer: A

NEW QUESTION 57
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