



Amazon-Web-Services

Exam Questions MLS-C01

AWS Certified Machine Learning - Specialty

NEW QUESTION 1

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 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 2

A Machine Learning Specialist is implementing a full Bayesian network on a dataset that describes public transit in New York City. One of the random variables is discrete, and represents the number of minutes New Yorkers wait for a bus given that the buses cycle every 10 minutes, with a mean of 3 minutes.

Which prior probability distribution should the ML Specialist use for this variable?

- A. Poisson distribution ,
- B. Uniform distribution
- C. Normal distribution
- D. Binomial distribution

Answer: D

NEW QUESTION 3

A Machine Learning Specialist is required to build a supervised image-recognition model to identify a cat. The ML Specialist performs some tests and records the following results for a neural network-based image classifier:

Total number of images available = 1,000 Test set images = 100 (constant test set)

The ML Specialist notices that, in over 75% of the misclassified images, the cats were held upside down by their owners.

Which techniques can be used by the ML Specialist to improve this specific test error?

- A. Increase the training data by adding variation in rotation for training images.
- B. Increase the number of epochs for model training.
- C. Increase the number of layers for the neural network.
- D. Increase the dropout rate for the second-to-last layer.

Answer: B

NEW QUESTION 4

Example Corp has an annual sale event from October to December. The company has sequential sales data from the past 15 years and wants to use Amazon ML to predict the sales for this year's upcoming event. Which method should Example Corp use to split the data into a training dataset and evaluation dataset?

- A. Pre-split the data before uploading to Amazon S3
- B. Have Amazon ML split the data randomly.
- C. Have Amazon ML split the data sequentially.
- D. Perform custom cross-validation on the data

Answer: C

NEW QUESTION 5

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

Answer: C

NEW QUESTION 6

A Machine Learning Specialist is developing recommendation engine for a photography blog Given a picture, the recommendation engine should show a picture that captures similar objects The Specialist would like to create a numerical representation feature to perform nearest-neighbor searches

What actions would allow the Specialist to get relevant numerical representations?

- A. Reduce image resolution and use reduced resolution pixel values as features
- B. Use Amazon Mechanical Turk to label image content and create a one-hot representation indicating the presence of specific labels
- C. Run images through a neural network pre-trained on ImageNet, and collect the feature vectors from the penultimate layer
- D. Average colors by channel to obtain three-dimensional representations of images.

Answer: A

NEW QUESTION 7

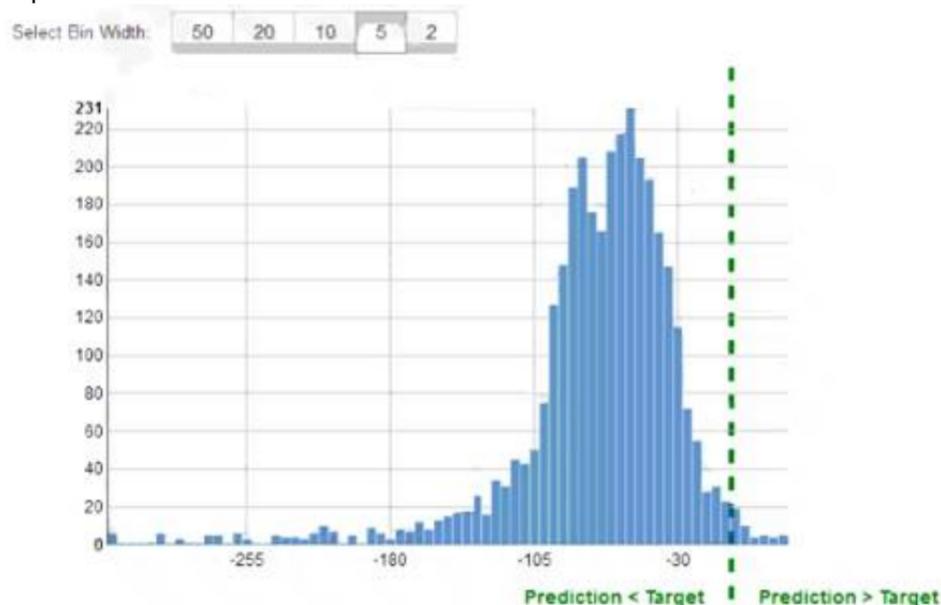
A Machine Learning Specialist is packaging a custom ResNet model into a Docker container so the company can leverage Amazon SageMaker for training. The Specialist is using Amazon EC2 P3 instances to train the model and needs to properly configure the Docker container to leverage the NVIDIA GPUs. What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

- 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 CreateTrainingJob request body

Answer: A

NEW QUESTION 8

While reviewing the histogram for residuals on regression evaluation data a Machine Learning Specialist notices that the residuals do not form a zero-centered bell shape as shown. What does this mean?



- A. The model might have prediction errors over a range of target values.
- B. The dataset cannot be accurately represented using the regression model
- C. There are too many variables in the model
- D. The model is predicting its target values perfectly.

Answer: D

NEW QUESTION 9

A company's Machine Learning Specialist needs to improve the training speed of a time-series forecasting model using TensorFlow. The training is currently implemented on a single-GPU machine and takes approximately 23 hours to complete. The training needs to be run daily. The model accuracy is acceptable, but the company anticipates a continuous increase in the size of the training data and a need to update the model on an hourly, rather than a daily, basis. The company also wants to minimize coding effort and infrastructure changes. What should the Machine Learning Specialist do to the training solution to allow it to scale for future demand?

- A. Do not change the TensorFlow code
- B. Change the machine to one with a more powerful GPU to speed up the training.
- C. Change the TensorFlow code to implement a Horovod distributed framework supported by Amazon SageMaker
- D. Parallelize the training to as many machines as needed to achieve the business goals.
- E. Switch to using a built-in AWS SageMaker DeepAR mode
- F. Parallelize the training to as many machines as needed to achieve the business goals.
- G. Move the training to Amazon EMR and distribute the workload to as many machines as needed to achieve the business goals.

Answer: B

NEW QUESTION 10

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.

Answer: B

NEW QUESTION 10

An agency collects census information within a country to determine healthcare and social program needs by province and city. The census form collects responses for approximately 500 questions from each citizen. Which combination of algorithms would provide the appropriate insights? (Select TWO)

- A. The factorization machines (FM) algorithm
- B. The Latent Dirichlet Allocation (LDA) algorithm
- C. The principal component analysis (PCA) algorithm
- D. The k-means algorithm
- E. The Random Cut Forest (RCF) algorithm

Answer: CD

Explanation:

The PCA and K-means algorithms are useful in collection of data using census form.

NEW QUESTION 14

A Machine Learning Specialist has created a deep learning neural network model that performs well on the training data but performs poorly on the test data. Which of the following methods should the Specialist consider using to correct this? (Select THREE.)

- A. Decrease regularization.
- B. Increase regularization.
- C. Increase dropout.
- D. Decrease dropout.
- E. Increase feature combinations.
- F. Decrease feature combinations.

Answer: BDE

NEW QUESTION 19

A large mobile network operating company is building a machine learning model to predict customers who are likely to unsubscribe from the service. The company plans to offer an incentive for these customers as the cost of churn is far greater than the cost of the incentive.

The model produces the following confusion matrix after evaluating on a test dataset of 100 customers: Based on the model evaluation results, why is this a viable model for production?

n = 100	PREDICTED CHURN	
	Yes	No
ACTUAL Churn Yes	10	4
Actual No	10	76

- A. The model is 86% accurate and the cost incurred by the company as a result of false negatives is less than the false positives.
- B. The precision of the model is 86%, which is less than the accuracy of the model.
- C. The model is 86% accurate and the cost incurred by the company as a result of false positives is less than the false negatives.
- D. The precision of the model is 86%, which is greater than the accuracy of the model.

Answer: B

NEW QUESTION 24

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 do?

- 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 25

A Machine Learning Specialist is using Apache Spark for pre-processing training data. As part of the Spark pipeline, the Specialist wants to use Amazon SageMaker for training a model and hosting it. Which of the following would the Specialist do to integrate the Spark application with SageMaker? (Select THREE.)

- A. Download the AWS SDK for the Spark environment
- B. Install the SageMaker Spark library in the Spark environment.
- C. Use the appropriate estimator from the SageMaker Spark Library to train a model.
- D. Compress the training data into a ZIP file and upload it to a pre-defined Amazon S3 bucket.
- E. Use the sageMakerMode
- F. transform method to get inferences from the model hosted in SageMaker
- G. Convert the DataFrame object to a CSV file, and use the CSV file as input for obtaining inferences from SageMaker.

Answer: DEF

NEW QUESTION 29

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 (RM&)
- D. L1 norm

Answer: A

NEW QUESTION 30

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 35

A Mobile Network Operator is building an analytics platform to analyze and optimize a company's operations using Amazon Athena and Amazon S3 The source systems send data in CSV format in real lime The Data Engineering team wants to transform the data to the Apache Parquet format before storing it on Amazon S3

Which solution takes the LEAST effort to implement?

- A. Ingest .CSV data using Apache Kafka Streams on Amazon EC2 instances and use Kafka Connect S3 to serialize data as Parquet
- B. Ingest .CSV data from Amazon Kinesis Data Streams and use Amazon Glue to convert data into Parquet.
- C. Ingest .CSV data using Apache Spark Structured Streaming in an Amazon EMR cluster and use Apache Spark to convert data into Parquet.
- D. Ingest .CSV data from Amazon Kinesis Data Streams and use Amazon Kinesis Data Firehose to convert data into Parquet.

Answer: C

NEW QUESTION 40

A Machine Learning Specialist is developing a custom video recommendation model for an application The dataset used to train this model is very large with millions of data points and is hosted in an Amazon S3 bucket The Specialist wants to avoid loading all of this data onto an Amazon SageMaker notebook instance because it would take hours to move and will exceed the attached 5 GB Amazon EBS volume on the notebook instance.

Which approach allows the Specialist to use all the data to train the model?

- A. Load a smaller subset of the data into the SageMaker notebook and train local
- B. Confirm that the training code is executing and the model parameters seem reasonabl
- C. Initiate a SageMaker training job using the full dataset from the S3 bucket using Pipe input mode.
- D. Launch an Amazon EC2 instance with an AWS Deep Learning AMI and attach the S3 bucket to theinstanc
- E. Train on a small amount of the data to verify the training code and hyperparameter
- F. Go back toAmazon SageMaker and train using the full dataset
- G. Use AWS Glue to train a model using a small subset of the data to confirm that the data will be compatiblewith Amazon SageMake
- H. Initiate a SageMaker training job using the full dataset from the S3 bucket usingPipe input mode.
- I. Load a smaller subset of the data into the SageMaker notebook and train local
- J. Confirm that the training code is executing and the model parameters seem reasonabl
- K. Launch an Amazon EC2 instance with an AWS Deep Learning AMI and attach the S3 bucket to train the full dataset.

Answer: A

NEW QUESTION 44

A Machine Learning Specialist is building a prediction model for a large number of features using linear models, such as linear regression and logistic regression During exploratory data analysis the Specialist observes that many features are highly correlated with each other This may make the model unstable What should be done to reduce the impact of having such a large number of features?

- A. Perform one-hot encoding on highly correlated features
- B. Use matrix multiplication on highly correlated features.
- C. Create a new feature space using principal component analysis (PCA)
- D. Apply the Pearson correlation coefficient

Answer: C

NEW QUESTION 47

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 50

Amazon Connect has recently been tolled out across a company as a contact call center The solution has been configured to store voice call recordings on Amazon S3

The content of the voice calls are being analyzed for the incidents being discussed by the call operators Amazon Transcribe is being used to convert the audio to

text, and the output is stored on Amazon S3

Which approach will provide the information required for further analysis?

- A. Use Amazon Comprehend with the transcribed files to build the key topics
- B. Use Amazon Translate with the transcribed files to train and build a model for the key topics
- C. Use the AWS Deep Learning AMI with Gluon Semantic Segmentation on the transcribed files to train and build a model for the key topics
- D. Use the Amazon SageMaker k-Nearest-Neighbors (kNN) algorithm on the transcribed files to generate a word embeddings dictionary for the key topics

Answer: B

NEW QUESTION 53

A company has raw user and transaction data stored in AmazonS3 a MySQL database, and Amazon RedShift A Data Scientist needs to perform an analysis by joining the three datasets from Amazon S3, MySQL, and Amazon RedShift, and then calculating the average-of a few selected columns from the joined data Which AWS service should the Data Scientist use?

- A. Amazon Athena
- B. Amazon Redshift Spectrum
- C. AWS Glue
- D. Amazon QuickSight

Answer: A

NEW QUESTION 56

A Data Scientist is developing a machine learning model to classify whether a financial transaction is fraudulent. The labeled data available for training consists of 100,000 non-fraudulent observations and 1,000 fraudulent observations.

The Data Scientist applies the XGBoost algorithm to the data, resulting in the following confusion matrix when the trained model is applied to a previously unseen validation dataset. The accuracy of the model is 99.1%, but the Data Scientist has been asked to reduce the number of false negatives.

Predicted	0	1
Actual	0 99,966	1 34
	1 877	1 123

Which combination of steps should the Data Scientist take to reduce the number of false positive predictions by the model? (Select TWO.)

- A. Change the XGBoost eval_metric parameter to optimize based on rmse instead of error.
- B. Increase the XGBoost scale_pos_weight parameter to adjust the balance of positive and negative weights.
- C. Increase the XGBoost max_depth parameter because the model is currently underfitting the data.
- D. Change the XGBoost evaljnetric parameter to optimize based on AUC instead of error.
- E. Decrease the XGBoost max_depth parameter because the model is currently overfitting the data.

Answer: DE

NEW QUESTION 61

When submitting Amazon SageMaker training jobs using one of the built-in algorithms, which common parameters MUST be specified? (Select THREE.)

- A. The training channel identifying the location of training data on an Amazon S3 bucket.
- B. The validation channel identifying the location of validation data on an Amazon S3 bucket.
- C. The IAM role that Amazon SageMaker can assume to perform tasks on behalf of the users.
- D. Hyperparameters in a JSON array as documented for the algorithm used.
- E. The Amazon EC2 instance class specifying whether training will be run using CPU or GPU.
- F. The output path specifying where on an Amazon S3 bucket the trained model will persist.

Answer: AEF

NEW QUESTION 62

A Data Scientist is working on an application that performs sentiment analysis. The validation accuracy is poor and the Data Scientist thinks that the cause may be a rich vocabulary and a low average frequency of words in the dataset

Which tool should be used to improve the validation accuracy?

- A. Amazon Comprehend syntax analysts and entity detection
- B. Amazon SageMaker BlazingText allow mode
- C. Natural Language Toolkit (NLTK) stemming and stop word removal
- D. Scikit-learn term frequency-inverse document frequency (TF-IDF) vectorizers

Answer: D

NEW QUESTION 66

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 68

A Data Scientist wants to gain real-time insights into a data stream of GZIP files. Which solution would allow the use of SQL to query the stream with the LEAST latency?

- A. Amazon Kinesis Data Analytics with an AWS Lambda function to transform the data.
- B. AWS Glue with a custom ETL script to transform the data.
- C. An Amazon Kinesis Client Library to transform the data and save it to an Amazon ES cluster.
- D. Amazon Kinesis Data Firehose to transform the data and put it into an Amazon S3 bucket.

Answer: A

NEW QUESTION 69

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 QuickSight 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 to Amazon ES and use Kibana to query and visualize the log data.

Answer: B

NEW QUESTION 71

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 72

A Machine Learning Specialist is working with a media company to perform classification on popular articles from the company's website. The company is using random forests to classify how popular an article will be before it is published. A sample of the data being used is below. Given the dataset, the Specialist wants to convert the Day-Of-Week column to binary values. What technique should be used to convert this column to binary values.

Article Title	Author	Top Keywords	Day_of_Week	URL_of_Article	Page_Views
Building a Big Data Platform	Jane Doe	Big Data, Spark, Hadoop	Tuesday	http://examplecorp.com/data_platform.html	1300456
Getting Started with Deep Learning	John Doe	Deep Learning, Machine Learning, Spark	Tuesday	http://examplecorp.com/started_deep_learning.html	1230661
MXNet ML Guide	Jane Doe	Machine Learning, MXNet, Logistic Regression	Thursday	http://examplecorp.com/mxnet_guide.html	937291
Intro to NoSQL Databases	Mary Major	NoSQL, Operations, Database	Monday	http://examplecorp.com/nosql_intro_guide.html	407812

- A. Binarization
- B. One-hot encoding
- C. Tokenization
- D. Normalization transformation

Answer: B

NEW QUESTION 75

A web-based company wants to improve its conversion rate on its landing page. Using a large historical dataset of customer visits, the company has repeatedly trained a multi-class deep learning network algorithm on Amazon SageMaker. However, there is an overfitting problem: training data shows 90% accuracy in predictions, while test data shows 70% accuracy only.

The company needs to boost the generalization of its model before deploying it into production to maximize conversions of visits to purchases. Which action is recommended to provide the HIGHEST accuracy model for the company's test and validation data?

- A. Increase the randomization of training data in the mini-batches used in training.

- B. Allocate a higher proportion of the overall data to the training dataset
- C. Apply L1 or L2 regularization and dropouts to the training.
- D. Reduce the number of layers and units (or neurons) from the deep learning network.

Answer: A

NEW QUESTION 76

A Data Scientist needs to create a serverless ingestion and analytics solution for high-velocity, real-time streaming data.

The ingestion process must buffer and convert incoming records from JSON to a query-optimized, columnar format without data loss. The output datastore must be highly available, and Analysts must be able to run SQL queries against the data and connect to existing business intelligence dashboards.

Which solution should the Data Scientist build to satisfy the requirements?

- A. Create a schema in the AWS Glue Data Catalog of the incoming data format
- B. Use an Amazon Kinesis Data Firehose delivery stream to stream the data and transform the data to Apache Parquet or ORC format using the AWS Glue Data Catalog before delivering to Amazon S3. Have the Analysts query the data directly from Amazon S3 using Amazon Athena, and connect to BI tools using the Athena Java Database Connectivity (JDBC) connector.
- C. Write each JSON record to a staging location in Amazon S3. Use the S3 Put event to trigger an AWS Lambda function that transforms the data into Apache Parquet or ORC format and writes the data to a processed data location in Amazon S3. Have the Analysts query the data directly from Amazon S3 using Amazon Athena, and connect to BI tools using the Athena Java Database Connectivity (JDBC) connector.
- D. Write each JSON record to a staging location in Amazon S3. Use the S3 Put event to trigger an AWS Lambda function that transforms the data into Apache Parquet or ORC format and inserts it into an Amazon RDS PostgreSQL database
- E. Have the Analysts query and run dashboards from the RDS database.
- F. Use Amazon Kinesis Data Analytics to ingest the streaming data and perform real-time SQL queries to convert the records to Apache Parquet before delivering to Amazon S3. Have the Analysts query the data directly from Amazon S3 using Amazon Athena and connect to BI tools using the Athena Java Database Connectivity (JDBC) connector.

Answer: A

NEW QUESTION 78

A Machine Learning Specialist is using an Amazon SageMaker notebook instance in a private subnet of a corporate VPC. The ML Specialist has important data stored on the Amazon SageMaker notebook instance's Amazon EBS volume, and needs to take a snapshot of that EBS volume. However the ML Specialist cannot find the Amazon SageMaker notebook instance's EBS volume or Amazon EC2 instance within the VPC.

Why is the ML Specialist not seeing the instance visible in the VPC?

- A. Amazon SageMaker notebook instances are based on the EC2 instances within the customer account, but they run outside of VPCs.
- B. Amazon SageMaker notebook instances are based on the Amazon ECS service within customer accounts.
- C. Amazon SageMaker notebook instances are based on EC2 instances running within AWS service accounts.
- D. Amazon SageMaker notebook instances are based on AWS ECS instances running within AWS service accounts.

Answer: C

NEW QUESTION 81

IT leadership wants to transition a company's existing machine learning data storage environment to AWS as a temporary ad hoc solution. The company currently uses a custom software process that heavily leverages SQL as a query language and exclusively stores generated CSV documents for machine learning. The ideal state for the company would be a solution that allows it to continue to use the current workforce of SQL experts. The solution must also support the storage of CSV and JSON files, and be able to query over semi-structured data. The following are high priorities for the company:

- Solution simplicity
- Fast development time
- Low cost
- High flexibility

What technologies meet the company's requirements?

- A. Amazon S3 and Amazon Athena
- B. Amazon Redshift and AWS Glue
- C. Amazon DynamoDB and DynamoDB Accelerator (DAX)
- D. Amazon RDS and Amazon ES

Answer: B

NEW QUESTION 86

A manufacturing company has a large set of labeled historical sales data. The manufacturer would like to predict how many units of a particular part should be produced each quarter. Which machine learning approach should be used to solve this problem?

- A. Logistic regression
- B. Random Cut Forest (RCF)
- C. Principal component analysis (PCA)
- D. Linear regression

Answer: B

NEW QUESTION 87

A Data Scientist is developing a machine learning model to predict future patient outcomes based on information collected about each patient and their treatment plans. The model should output a continuous value as its prediction. The data available includes labeled outcomes for a set of 4,000 patients. The study was conducted on a group of individuals over the age of 65 who have a particular disease that is known to worsen with age.

Initial models have performed poorly. While reviewing the underlying data, the Data Scientist notices that, out of 4,000 patient observations, there are 450 where the patient age has been input as 0. The other features for these observations appear normal compared to the rest of the sample population.

How should the Data Scientist correct this issue?

- A. Drop all records from the dataset where age has been set to 0.
- B. Replace the age field value for records with a value of 0 with the mean or median value from the dataset.
- C. Drop the age feature from the dataset and train the model using the rest of the features.
- D. Use k-means clustering to handle missing features.

Answer: A

NEW QUESTION 92

A Data Engineer needs to build a model using a dataset containing customer credit card information.

How can the Data Engineer ensure the data remains encrypted and the credit card information is secure? Use a custom encryption algorithm to encrypt the data and store the data on an Amazon SageMaker instance in a VPC. Use the SageMaker DeepAR algorithm to randomize the credit card numbers.

- A. Use an IAM policy to encrypt the data on the Amazon S3 bucket and Amazon Kinesis to automatically discard credit card numbers and insert fake credit card numbers.
- B. Use an Amazon SageMaker launch configuration to encrypt the data once it is copied to the SageMaker instance in a VP
- C. Use the SageMaker principal component analysis (PCA) algorithm to reduce the length of the credit card numbers.
- D. Use AWS KMS to encrypt the data on Amazon S3

Answer: C

NEW QUESTION 97

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 102

A company is using Amazon Polly to translate plaintext documents to speech for automated company announcements. However, company acronyms are being mispronounced in the current documents. How should a Machine Learning Specialist address this issue for future documents?

- A. Convert current documents to SSML with pronunciation tags
- B. Create an appropriate pronunciation lexicon.
- C. Output speech marks to guide in pronunciation
- D. Use Amazon Lex to preprocess the text files for pronunciation

Answer: A

NEW QUESTION 104

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