Amazon

Exam Questions AWS-Certified-Machine-Learning-Specialty

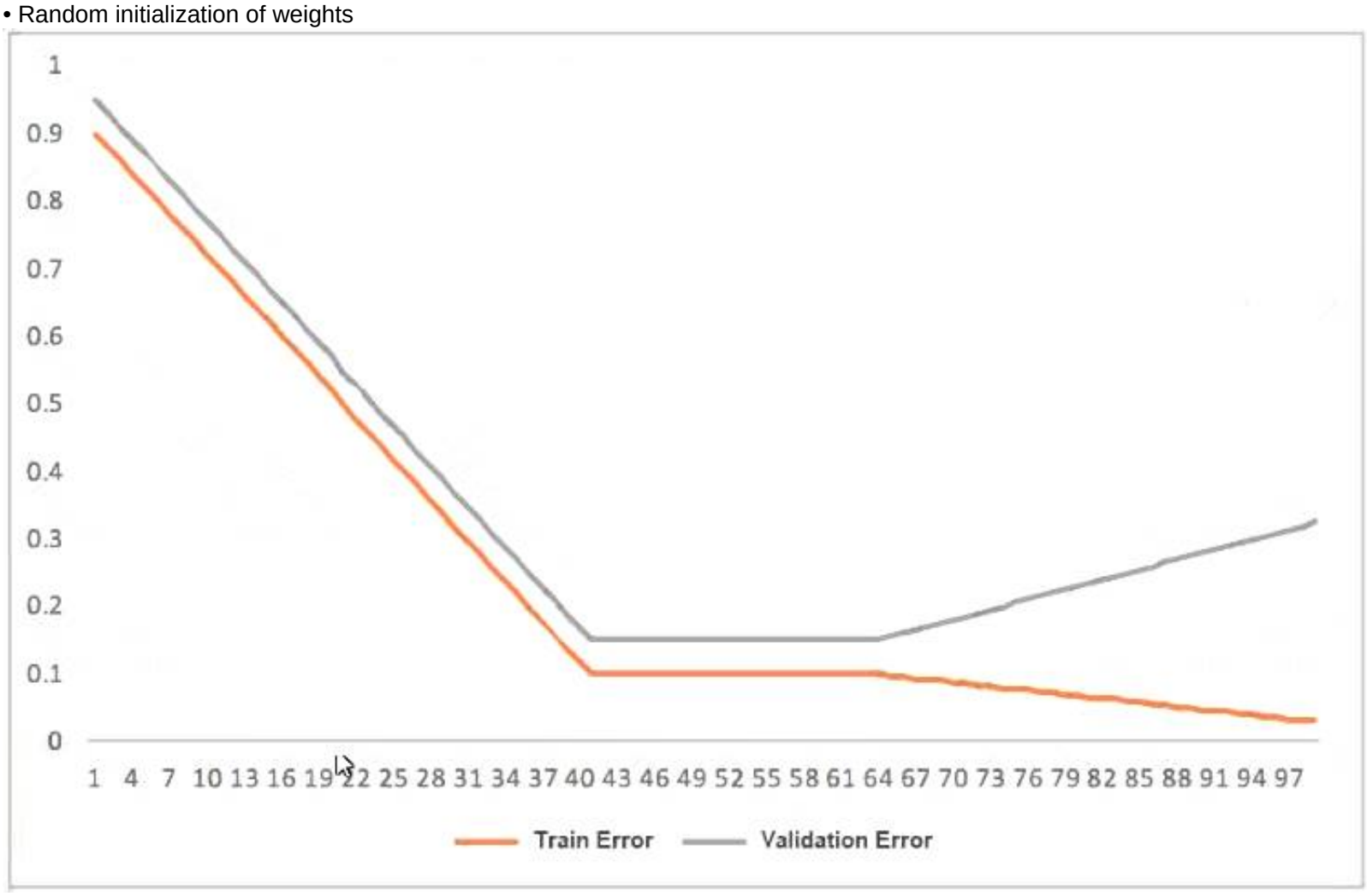
AWS Certified Machine Learning - Specialty

NEW QUESTION 1
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 forma
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 Bl 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 Bl 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 databas
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 Bl tools using the Athena Java Database Connectivity (JDBC) connector.

Answer: A

NEW QUESTION 2
This graph shows the training and validation loss against the epochs for a neural network The network being trained is as follows
• Two dense layers one output neuron
• 100 neurons in each layer
• 100 epochs
• Random initialization of weights



Which technique can be used to improve model performance in terms of accuracy in the validation set?

A. Early stopping
B. Random initialization of weights with appropriate seed
C. Increasing the number of epochs
D. Adding another layer with the 100 neurons

Answer: D

NEW QUESTION 3
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 4
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 5
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

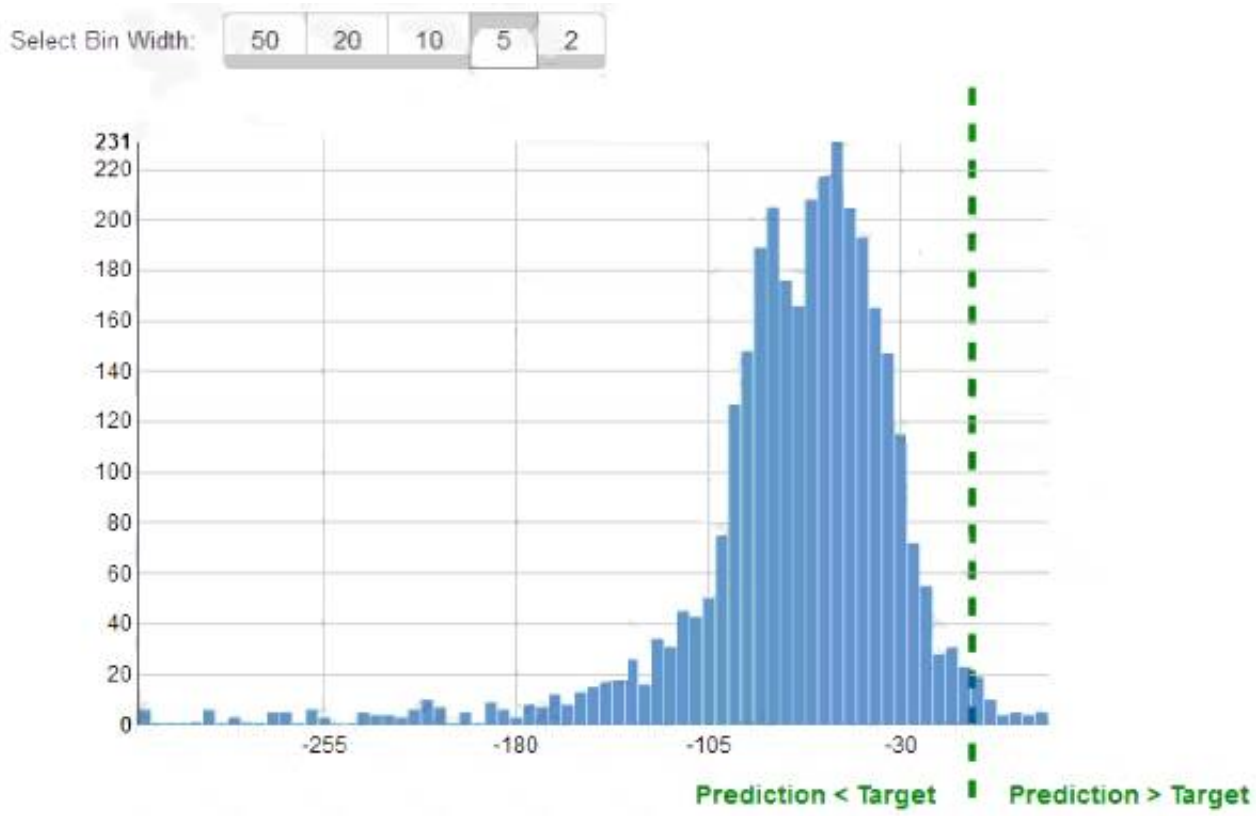
Answer: A

NEW QUESTION 6
A retail company wants to update its customer support system. The company wants to implement automatic routing of customer claims to different queues to prioritize the claims by category.
Currently, an operator manually performs the category assignment and routing. After the operator classifies and routes the claim, the company stores the claim's record in a central database. The claim's record includes the claim's category.
The company has no data science team or experience in the field of machine learning (ML). The company's small development team needs a solution that requires no ML expertise.
Which solution meets these requirements?

A. Export the database to a .csv file with two columns: claim_label and claim_tex
B. Use the Amazon SageMaker Object2Vec algorithm and the .csv file to train a mode
C. Use SageMaker to deploy the model to an inference endpoin
D. Develop a service in the application to use the inference endpoint to process incoming claims, predict the labels, and route the claims to the appropriate queue.
E. Export the database to a .csv file with one column: claim_tex
F. Use the Amazon SageMaker Latent Dirichlet Allocation (LDA) algorithm and the .csv file to train a mode
G. Use the LDA algorithm to detect labels automaticall
H. Use SageMaker to deploy the model to an inference endpoin
I. Develop a service in the application to use the inference endpoint to process incoming claims, predict the labels, and route the claims to the appropriate queue.
J. Use Amazon Textract to process the database and automatically detect two columns: claim_label and claim_tex
K. Use Amazon Comprehend custom classification and the extracted information to train the custom classifie
L. Develop a service in the application to use the Amazon Comprehend API to process incoming claims, predict the labels, and route the claims to the appropriate queue.
M. Export the database to a .csv file with two columns: claim_label and claim_tex
N. Use Amazon Comprehend custom classification and the .csv file to train the custom classifie
O. Develop a service in the application to use the Amazon Comprehend API to process incoming claims, predict the labels, and route the claims to the appropriate queue.

Answer: C

NEW QUESTION 7
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 8
A retail company intends to use machine learning to categorize new products A labeled dataset of current products was provided to the Data Science team The dataset includes 1 200 products The labeled dataset has 15 features for each product such as title dimensions, weight, and price Each product is labeled as belonging to one of six categories such as books, games, electronics, and movies.
Which model should be used for categorizing new products using the provided dataset for training?

A. An XGBoost model where the objective parameter is set to multi: softmax
B. A deep convolutional neural network (CNN) with a softmax activation function for the last layer
C. A regression forest where the number of trees is set equal to the number of product categories
D. A DeepAR forecasting model based on a recurrent neural network (RNN)

Answer: A

NEW QUESTION 9
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: A

NEW QUESTION 10
A company will use Amazon SageMaker to train and host a machine learning (ML) model for a marketing campaign. The majority of data is sensitive customer data. The data must be encrypted at rest. The company wants AWS to maintain the root of trust for the master keys and wants encryption key usage to be logged.
Which implementation will meet these requirements?

A. Use encryption keys that are stored in AWS Cloud HSM to encrypt the ML data volumes, and to encryptthe model artifacts and data in Amazon S3.
B. Use SageMaker built-in transient keys to encrypt the ML data volume
C. Enable default encryption for new Amazon Elastic Block Store (Amazon EBS) volumes.
D. Use customer managed keys in AWS Key Management Service (AWS KMS) to encrypt the ML data volumes, and to encrypt the model artifacts and data in Amazon S3.
E. Use AWS Security Token Service (AWS STS) to create temporary tokens to encrypt the ML storage volumes, and to encrypt the model artifacts and data in Amazon S3.

Answer: C

NEW QUESTION 10
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 11
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 long Amazon SageMaker API calls to Amazon S3. Add code to push a custom metric to Amazon CloudWatc
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 CloudWatc
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 CloudTrai
F. Add code to push a custom metric to Amazon CloudWatc
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 13
The Chief Editor for a product catalog wants the Research and Development team to build a machine learning system that can be used to detect whether or not individuals in a collection of images are wearing the company's retail brand The team has a set of training data
Which machine learning algorithm should the researchers use that BEST meets their requirements?

A. Latent Dirichlet Allocation (LDA)
B. Recurrent neural network (RNN)
C. K-means
D. Convolutional neural network (CNN)

Answer: C

NEW QUESTION 17
An e-commerce company needs a customized training model to classify images of its shirts and pants products The company needs a proof of concept in 2 to 3 days with good accuracy Which compute choice should the Machine Learning Specialist select to train and achieve good accuracy on the model quickly?

A. m5 4xlarge (general purpose)
B. r5.2xlarge (memory optimized)
C. p3.2xlarge (GPU accelerated computing)
D. p3 8xlarge (GPU accelerated computing)

Answer: C

NEW QUESTION 22
A Machine Learning Specialist deployed a model that provides product recommendations on a company's website Initially, the model was performing very well and resulted in customers buying more products on average However within the past few months the Specialist has noticed that the effect of product recommendations has diminished and customers are starting to return to their original habits of spending less The Specialist is unsure of what happened, as the model has not changed from its initial deployment over a year ago
Which method should the Specialist try to improve model performance?

A. The model needs to be completely re-engineered because it is unable to handle product inventory changes
B. The model's hyperparameters should be periodically updated to prevent drift
C. The model should be periodically retrained from scratch using the original data while adding a regularization term to handle product inventory changes
D. The model should be periodically retrained using the original training data plus new data as product inventory changes

Answer: D

NEW QUESTION 27
A company is setting up an Amazon SageMaker environment. The corporate data security policy does not allow communication over the internet.
How can the company enable the Amazon SageMaker service without enabling direct internet access to Amazon SageMaker notebook instances?

A. Create a NAT gateway within the corporate VPC.
B. Route Amazon SageMaker traffic through an on-premises network.
C. Create Amazon SageMaker VPC interface endpoints within the corporate VPC.
D. Create VPC peering with Amazon VPC hosting Amazon SageMaker.

Answer: A

NEW QUESTION 30
An Machine Learning Specialist discover the following statistics while experimenting on a model.

Experiment 1
Baseline model
Train error = 5%
Test error = 16%

Experiment 2
The Specialist added more layers and neurons to the model and received the following results:
Train error = 5.2%
Test error = 15.7%

Experiment 3
The Specialist reverted back to the original number of neurons from Experiment 1 and implemented regularization in the neural network, which yielded the following results
Train error = 4.7%
Test error = 9.5%

What can the Specialist from the experiments?

A. The model In Experiment 1 had a high variance error lhat was reduced in Experiment 3 by regularization Experiment 2 shows that there is minimal bias error in Experiment 1
B. The model in Experiment 1 had a high bias error that was reduced in Experiment 3 by regularization Experiment 2 shows that there is minimal variance error in Experiment 1
C. The model in Experiment 1 had a high bias error and a high variance error that were reduced in Experiment 3 by regularization Experiment 2 shows thai high bias cannot be reduced by increasing layers and neurons in the model
D. The model in Experiment 1 had a high random noise error that was reduced in Expenment 3 by regularization Expenment 2 shows that random noise cannot be reduced by increasing layers and neurons in the model

Answer: C

NEW QUESTION 34
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 36
A Machine Learning team runs its own training algorithm on Amazon SageMaker. The training algorithm requires external assets. The team needs to submit both its own algorithm code and algorithm-specific parameters to Amazon SageMaker.
What combination of services should the team use to build a custom algorithm in Amazon SageMaker? (Choose two.)

A. AWS Secrets Manager
B. AWS CodeStar
C. Amazon ECR
D. Amazon ECS
E. Amazon S3

Answer: CE

NEW QUESTION 40
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 41
A machine learning (ML) specialist wants to secure calls to the Amazon SageMaker Service API. The specialist has configured Amazon VPC with a VPC interface endpoint for the Amazon SageMaker Service API and is attempting to secure traffic from specific sets of instances and IAM users. The VPC is configured with a single public subnet.
Which combination of steps should the ML specialist take to secure the traffic? (Choose two.)

A. Add a VPC endpoint policy to allow access to the IAM users.
B. Modify the users' IAM policy to allow access to Amazon SageMaker Service API calls only.
C. Modify the security group on the endpoint network interface to restrict access to the instances.
D. Modify the ACL on the endpoint network interface to restrict access to the instances.
E. Add a SageMaker Runtime VPC endpoint interface to the VPC.

Answer: AC

NEW QUESTION 46
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 47
A Machine Learning Specialist is configuring Amazon SageMaker so multiple Data Scientists can access notebooks, train models, and deploy endpoints. To ensure the best operational performance, the Specialist needs to be able to track how often the Scientists are deploying models, GPU and CPU utilization on the deployed SageMaker endpoints, and all errors that are generated when an endpoint is invoked.
Which services are integrated with Amazon SageMaker to track this information? (Select TWO.)

A. AWS CloudTrail
B. AWS Health
C. AWS Trusted Advisor
D. Amazon CloudWatch
E. AWS Config

Answer: AD

NEW QUESTION 52
A global financial company is using machine learning to automate its loan approval process. The company has a dataset of customer information. The dataset contains some categorical fields, such as customer location by city and housing status. The dataset also includes financial fields in different units, such as account balances in US dollars and monthly interest in US cents.
The company's data scientists are using a gradient boosting regression model to infer the credit score for each customer. The model has a training accuracy of 99% and a testing accuracy of 75%. The data scientists want to improve the model's testing accuracy.
Which process will improve the testing accuracy the MOST?

A. Use a one-hot encoder for the categorical fields in the datase
B. Perform standardization on the financial fields in the datase
C. Apply L1 regularization to the data.
D. Use tokenization of the categorical fields in the datase
E. Perform binning on the financial fields in the datase
F. Remove the outliers in the data by using the z-score.
G. Use a label encoder for the categorical fields in the datase
H. Perform L1 regularization on the financial fields in the datase
I. Apply L2 regularization to the data.
J. Use a logarithm transformation on the categorical fields in the datase
K. Perform binning on the financial fields in the datase
L. Use imputation to populate missing values in the dataset.

Answer: B

NEW QUESTION 54
A machine learning (ML) specialist must develop a classification model for a financial services company. A domain expert provides the dataset, which is tabular with 10,000 rows and 1,020 features. During exploratory data analysis, the specialist finds no missing values and a small percentage of duplicate rows. There are correlation scores of > 0.9 for 200 feature pairs. The mean value of each feature is similar to its 50th percentile.
Which feature engineering strategy should the ML specialist use with Amazon SageMaker?

A. Apply dimensionality reduction by using the principal component analysis (PCA) algorithm.
B. Drop the features with low correlation scores by using a Jupyter notebook.
C. Apply anomaly detection by using the Random Cut Forest (RCF) algorithm.
D. Concatenate the features with high correlation scores by using a Jupyter notebook.

Answer: C

NEW QUESTION 57
A real-estate company is launching a new product that predicts the prices of new houses. The historical data for the properties and prices is stored in .csv format in an Amazon S3 bucket. The data has a header, some categorical fields, and some missing values. The company's data scientists have used Python with a common open-source library to fill the missing values with zeros. The data scientists have dropped all of the categorical fields and have trained a model by using the open-source linear regression algorithm with the default parameters.
The accuracy of the predictions with the current model is below 50%. The company wants to improve the model performance and launch the new product as soon as possible.
Which solution will meet these requirements with the LEAST operational overhead?

A. Create a service-linked role for Amazon Elastic Container Service (Amazon ECS) with access to the S3 bucke
B. Create an ECS cluster that is based on an AWS Deep Learning Containers imag
C. Write the code to perform the feature engineerin
D. Train a logistic regression model for predicting the price, pointing to the bucket with the datase
E. Wait for the training job to complet
F. Perform the inferences.

G. Create an Amazon SageMaker notebook with a new IAM role that is associated with the noteboo
H. Pull the dataset from the S3 bucke
I. Explore different combinations of feature engineering transformations,regression algorithms, and hyperparameter
J. Compare all the results in the notebook, and deploy the most accurate configuration in an endpoint for predictions.
K. Create an IAM role with access to Amazon S3, Amazon SageMaker, and AWS Lambd
L. Create a training job with the SageMaker built-in XGBoost model pointing to the bucket with the datase
M. Specify the price as the target featur
N. Wait for the job to complet
O. Load the model artifact to a Lambda function for inference on prices of new houses.
P. Create an IAM role for Amazon SageMaker with access to the S3 bucke
Q. Create a SageMaker AutoML job with SageMaker Autopilot pointing to the bucket with the datase
R. Specify the price as the target attribut
S. Wait for the job to complet
T. Deploy the best model for predictions.

Answer: A

NEW QUESTION 61
A company that promotes healthy sleep patterns by providing cloud-connected devices currently hosts a sleep tracking application on AWS. The application collects device usage information from device users. The company's Data Science team is building a machine learning model to predict if and when a user will stop utilizing the company's devices. Predictions from this model are used by a downstream application that determines the best approach for contacting users.
The Data Science team is building multiple versions of the machine learning model to evaluate each version against the company's business goals. To measure long-term effectiveness, the team wants to run multiple versions of the model in parallel for long periods of time, with the ability to control the portion of inferences served by the models.
Which solution satisfies these requirements with MINIMAL effort?

A. Build and host multiple models in Amazon SageMake
B. Create multiple Amazon SageMaker endpoints, one for each mode
C. Programmatically control invoking different models for inference at the applicationlayer.
D. Build and host multiple models in Amazon SageMake
E. Create an Amazon SageMaker endpoint configuration with multiple production variant
F. Programmatically control the portion of the inferences served by the multiple models by updating the endpoint configuration.
G. Build and host multiple models in Amazon SageMaker Neo to take into account different types of medical device
H. Programmatically control which model is invoked for inference based on the medical device type.
I. Build and host multiple models in Amazon SageMake
J. Create a single endpoint that accesses multiple model
K. Use Amazon SageMaker batch transform to control invoking the different models through the single endpoint.

Answer: B

Explanation:
A/B testing with Amazon SageMaker is required in the Exam. In A/B testing, you test different variants of your models and compare how each variant performs. Amazon SageMaker enables you to test multiple models or model versions behind the `same endpoint` using `production variants`. Each production variant identifies a machine learning (ML) model and the resources deployed for hosting the model. To test multiple models by `distributing traffic` between them, specify the `percentage of the traffic` that gets routed to each model by specifying the `weight` for each `production variant` in the endpoint configuration.
https://docs.aws.amazon.com/sagemaker/latest/dg/model-ab-testing.html#model-testing-target-variant

NEW QUESTION 62
A Machine Learning Specialist is developing a daily ETL workflow containing multiple ETL jobs The workflow consists of the following processes
* Start the workflow as soon as data is uploaded to Amazon S3
* When all the datasets are available in Amazon S3, start an ETL job to join the uploaded datasets with multiple terabyte-sized datasets already stored in Amazon S3
* Store the results of joining datasets in Amazon S3
* If one of the jobs fails, send a notification to the Administrator Which configuration will meet these requirements?

A. Use AWS Lambda to trigger an AWS Step Functions workflow to wait for dataset uploads to complete in Amazon S3. Use AWS Glue to join the datasets Use an Amazon CloudWatch alarm to send an SNS notification to the Administrator in the case of a failure
B. Develop the ETL workflow using AWS Lambda to start an Amazon SageMaker notebook instance Use a lifecycle configuration script to join the datasets and persist the results in Amazon S3 Use an Amazon CloudWatch alarm to send an SNS notification to the Administrator in the case of a failure
C. Develop the ETL workflow using AWS Batch to trigger the start of ETL jobs when data is uploaded to Amazon S3 Use AWS Glue to join the datasets in Amazon S3 Use an Amazon CloudWatch alarm to send an SNS notification to the Administrator in the case of a failure
D. Use AWS Lambda to chain other Lambda functions to read and join the datasets in Amazon S3 as soon as the data is uploaded to Amazon S3 Use an Amazon CloudWatch alarm to send an SNS notification to the Administrator in the case of a failure

Answer: A

NEW QUESTION 67
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 68
A machine learning (ML) specialist wants to create a data preparation job that uses a PySpark script with complex window aggregation operations to create data for training and testing. The ML specialist needs to evaluate the impact of the number of features and the sample count on model performance.
Which approach should the ML specialist use to determine the ideal data transformations for the model?

A. Add an Amazon SageMaker Debugger hook to the script to capture key metric
B. Run the script as an AWS Glue job.
C. Add an Amazon SageMaker Experiments tracker to the script to capture key metric
D. Run the script as an AWS Glue job.
E. Add an Amazon SageMaker Debugger hook to the script to capture key parameter
F. Run the script as a SageMaker processing job.
G. Add an Amazon SageMaker Experiments tracker to the script to capture key parameter
H. Run the script as a SageMaker processing job.

Answer: B

NEW QUESTION 71
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 needs to reduce the number of false negatives.

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

Which combination of steps should the Data Scientist take to reduce the number of false negative predictions by the model? (Choose two.)

A. Change the XGBoost eval_metric parameter to optimize based on Root Mean Square Error (RMSE).
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 eval_metric parameter to optimize based on Area Under the ROC Curve (AUC).
E. Decrease the XGBoost max_depth parameter because the model is currently overfitting the data.

Answer: BD

NEW QUESTION 75
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 80
A technology startup is using complex deep neural networks and GPU compute to recommend the company's products to its existing customers based upon each customer's habits and interactions. The solution currently pulls each dataset from an Amazon S3 bucket before loading the data into a TensorFlow model pulled from the company's Git repository that runs locally. This job then runs for several hours while continually outputting its progress to the same S3 bucket. The job can be paused, restarted, and continued at any time in the event of a failure, and is run from a central queue.
Senior managers are concerned about the complexity of the solution's resource management and the costs involved in repeating the process regularly. They ask for the workload to be automated so it runs once a week, starting Monday and completing by the close of business Friday.
Which architecture should be used to scale the solution at the lowest cost?

A. Implement the solution using AWS Deep Learning Containers and run the container as a job using AWS Batch on a GPU-compatible Spot Instance
B. Implement the solution using a low-cost GPU-compatible Amazon EC2 instance and use the AWS Instance Scheduler to schedule the task
C. Implement the solution using AWS Deep Learning Containers, run the workload using AWS Fargate running on Spot Instances, and then schedule the task using the built-in task scheduler
D. Implement the solution using Amazon ECS running on Spot Instances and schedule the task using the ECS service scheduler

Answer: C

NEW QUESTION 82
A Data Scientist is developing a binary classifier to predict whether a patient has a particular disease on a series of test results. The Data Scientist has data on 400 patients randomly selected from the population. The disease is seen in 3% of the population.
Which cross-validation strategy should the Data Scientist adopt?

A. A k-fold cross-validation strategy with k=5
B. A stratified k-fold cross-validation strategy with k=5
C. A k-fold cross-validation strategy with k=5 and 3 repeats
D. An 80/20 stratified split between training and validation

Answer: B

NEW QUESTION 83
A data scientist has been running an Amazon SageMaker notebook instance for a few weeks. During this time, a new version of Jupyter Notebook was released along with additional software updates. The security team mandates that all running SageMaker notebook instances use the latest security and software updates

provided by SageMaker.
How can the data scientist meet this requirements?

A. Call the CreateNotebookInstanceLifecycleConfig API operation
B. Create a new SageMaker notebook instance and mount the Amazon Elastic Block Store (Amazon EBS) volume from the original instance
C. Stop and then restart the SageMaker notebook instance
D. Call the UpdateNotebookInstanceLifecycleConfig API operation

Answer: C

NEW QUESTION 85
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 89
A company is building a line-counting application for use in a quick-service restaurant. The company wants to use video cameras pointed at the line of customers at a given register to measure how many people are in line and deliver notifications to managers if the line grows too long. The restaurant locations have limited bandwidth for connections to external services and cannot accommodate multiple video streams without impacting other operations.
Which solution should a machine learning specialist implement to meet these requirements?

A. Install cameras compatible with Amazon Kinesis Video Streams to stream the data to AWS over the restaurant's existing internet connectio
B. Write an AWS Lambda function to take an image and send it to Amazon Rekognition to count the number of faces in the imag
C. Send an Amazon Simple Notification Service (Amazon SNS) notification if the line is too long.
D. Deploy AWS DeepLens cameras in the restaurant to capture vide
E. Enable Amazon Rekognition on the AWS DeepLens device, and use it to trigger a local AWS Lambda function when a person is recognize
F. Use the Lambda function to send an Amazon Simple Notification Service (Amazon SNS) notification if the line is too long.
G. Build a custom model in Amazon SageMaker to recognize the number of people in an imag
H. Install cameras compatible with Amazon Kinesis Video Streams in the restauran
I. Write an AWS Lambda function to take an imag
J. Use the SageMaker endpoint to call the model to count peopl
K. Send an Amazon Simple Notification Service (Amazon SNS) notification if the line is too long.
L. Build a custom model in Amazon SageMaker to recognize the number of people in an imag
M. Deploy AWS DeepLens cameras in the restauran
N. Deploy the model to the camera
O. Deploy an AWS Lambda function to the cameras to use the model to count people and send an Amazon Simple Notification Service (Amazon SNS) notification if the line is too long.

Answer: A

NEW QUESTION 93
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 97
A data scientist is working on a public sector project for an urban traffic system. While studying the traffic patterns, it is clear to the data scientist that the traffic behavior at each light is correlated, subject to a small stochastic error term. The data scientist must model the traffic behavior to analyze the traffic patterns and reduce congestion.
How will the data scientist MOST effectively model the problem?

A. The data scientist should obtain a correlated equilibrium policy by formulating this problem as a multi-agent reinforcement learning problem.
B. The data scientist should obtain the optimal equilibrium policy by formulating this problem as a single-agent reinforcement learning problem.
C. Rather than finding an equilibrium policy, the data scientist should obtain accurate predictors of traffic flow by using historical data through a supervised learning approach.

D. Rather than finding an equilibrium policy, the data scientist should obtain accurate predictors of traffic flow by using unlabeled simulated data representing the new traffic patterns in the city and applying an unsupervised learning approach.

Answer: D

NEW QUESTION 98
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: BCD

NEW QUESTION 103
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 104
A company that runs an online library is implementing a chatbot using Amazon Lex to provide book recommendations based on category. This intent is fulfilled by an AWS Lambda function that queries an Amazon DynamoDB table for a list of book titles, given a particular category. For testing, there are only three categories implemented as the custom slot types: "comedy," "adventure," and "documentary."
A machine learning (ML) specialist notices that sometimes the request cannot be fulfilled because Amazon Lex cannot understand the category spoken by users with utterances such as "funny," "fun," and "humor." The ML specialist needs to fix the problem without changing the Lambda code or data in DynamoDB.
How should the ML specialist fix the problem?

A. Add the unrecognized words in the enumeration values list as new values in the slot type.
B. Create a new custom slot type, add the unrecognized words to this slot type as enumeration values, and use this slot type for the slot.
C. Use the AMAZON.SearchQuery built-in slot types for custom searches in the database.
D. Add the unrecognized words as synonyms in the custom slot type.

Answer: C

NEW QUESTION 105
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: D

NEW QUESTION 106
A machine learning (ML) specialist is administering a production Amazon SageMaker endpoint with model monitoring configured. Amazon SageMaker Model Monitor detects violations on the SageMaker endpoint, so the ML specialist retrains the model with the latest dataset. This dataset is statistically representative of the current production traffic. The ML specialist notices that even after deploying the new SageMaker model and running the first monitoring job, the SageMaker endpoint still has violations.
What should the ML specialist do to resolve the violations?

A. Manually trigger the monitoring job to re-evaluate the SageMaker endpoint traffic sample.
B. Run the Model Monitor baseline job again on the new training se
C. Configure Model Monitor to use the new baseline.
D. Delete the endpoint and recreate it with the original configuration.
E. Retrain the model again by using a combination of the original training set and the new training set.

Answer: B

NEW QUESTION 110
A company that manufactures mobile devices wants to determine and calibrate the appropriate sales price for its devices. The company is collecting the relevant data and is determining data features that it can use to train machine learning (ML) models. There are more than 1,000 features, and the company wants to determine the primary features that contribute to the sales price.
Which techniques should the company use for feature selection? (Choose three.)

A. Data scaling with standardization and normalization

B. Correlation plot with heat maps
C. Data binning
D. Univariate selection
E. Feature importance with a tree-based classifier
F. Data augmentation

Answer: CDF

NEW QUESTION 115
A Machine Learning Specialist trained a regression model, but the first iteration needs optimizing. The Specialist needs to understand whether the model is more frequently overestimating or underestimating the target.
What option can the Specialist use to determine whether it is overestimating or underestimating the target value?

A. Root Mean Square Error (RMSE)
B. Residual plots
C. Area under the curve
D. Confusion matrix

Answer: B

NEW QUESTION 119
An agricultural company is interested in using machine learning to detect specific types of weeds in a 100-acre grassland field. Currently, the company uses tractor-mounted cameras to capture multiple images of the field as 10 × 10 grids. The company also has a large training dataset that consists of annotated images of popular weed classes like broadleaf and non-broadleaf docks.
The company wants to build a weed detection model that will detect specific types of weeds and the location of each type within the field. Once the model is ready, it will be hosted on Amazon SageMaker endpoints. The model will perform real-time inferencing using the images captured by the cameras. Which approach should a Machine Learning Specialist take to obtain accurate predictions?

A. Prepare the images in RecordIO format and upload them to Amazon S3. Use Amazon SageMaker to train, test, and validate the model using an image classification algorithm to categorize images into various weed classes.
B. Prepare the images in Apache Parquet format and upload them to Amazon S3. Use Amazon SageMaker to train, test, and validate the model using an object-detection single-shot multibox detector (SSD) algorithm.
C. Prepare the images in RecordIO format and upload them to Amazon S3. Use Amazon SageMaker to train, test, and validate the model using an object-detection single-shot multibox detector (SSD) algorithm.
D. Prepare the images in Apache Parquet format and upload them to Amazon S3. Use Amazon SageMaker to train, test, and validate the model using an image classification algorithm to categorize images into various weed classes.

Answer: C

NEW QUESTION 124
A Machine Learning Specialist is given a structured dataset on the shopping habits of a company's customer base. The dataset contains thousands of columns of data and hundreds of numerical columns for each customer. The Specialist wants to identify whether there are natural groupings for these columns across all customers and visualize the results as quickly as possible.
What approach should the Specialist take to accomplish these tasks?

A. Embed the numerical features using the t-distributed stochastic neighbor embedding (t-SNE) algorithm and create a scatter plot.
B. Run k-means using the Euclidean distance measure for different values of k and create an elbow plot.
C. Embed the numerical features using the t-distributed stochastic neighbor embedding (t-SNE) algorithm and create a line graph.
D. Run k-means using the Euclidean distance measure for different values of k and create box plots for each numerical column within each cluster.

Answer: B

NEW QUESTION 126
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: A

NEW QUESTION 127
A bank's Machine Learning team is developing an approach for credit card fraud detection The company has a large dataset of historical data labeled as fraudulent The goal is to build a model to take the information from new transactions and predict whether each transaction is fraudulent or not
Which built-in Amazon SageMaker machine learning algorithm should be used for modeling this problem?

A. Seq2seq
B. XGBoost
C. K-means

D. Random Cut Forest (RCF)

Answer: C

NEW QUESTION 129
A machine learning specialist works for a fruit processing company and needs to build a system that categorizes apples into three types. The specialist has collected a dataset that contains 150 images for each type of apple and applied transfer learning on a neural network that was pretrained on ImageNet with this dataset.
The company requires at least 85% accuracy to make use of the model.
After an exhaustive grid search, the optimal hyperparameters produced the following: 68% accuracy on the training set 67% accuracy on the validation set
What can the machine learning specialist do to improve the system's accuracy?

A. Upload the model to an Amazon SageMaker notebook instance and use the Amazon SageMaker HPO feature to optimize the model's hyperparameters.
B. Add more data to the training set and retrain the model using transfer learning to reduce the bias.
C. Use a neural network model with more layers that are pretrained on ImageNet and apply transfer learning to increase the variance.
D. Train a new model using the current neural network architecture.

Answer: B

NEW QUESTION 133
Which of the following metrics should a Machine Learning Specialist generally use to compare/evaluate machine learning classification models against each other?

A. Recall
B. Misclassification rate
C. Mean absolute percentage error (MAPE)
D. Area Under the ROC Curve (AUC)

Answer: D

NEW QUESTION 138
A machine learning specialist stores IoT soil sensor data in Amazon DynamoDB table and stores weather event data as JSON files in Amazon S3. The dataset in DynamoDB is 10 GB in size and the dataset in Amazon S3 is 5 GB in size. The specialist wants to train a model on this data to help predict soil moisture levels as a function of weather events using Amazon SageMaker.
Which solution will accomplish the necessary transformation to train the Amazon SageMaker model with the LEAST amount of administrative overhead?

A. Launch an Amazon EMR cluste
B. Create an Apache Hive external table for the DynamoDB table and S3 dat
C. Join the Hive tables and write the results out to Amazon S3.
D. Crawl the data using AWS Glue crawler
E. Write an AWS Glue ETL job that merges the two tables and writes the output to an Amazon Redshift cluster.
F. Enable Amazon DynamoDB Streams on the sensor tabl
G. Write an AWS Lambda function that consumes the stream and appends the results to the existing weather files in Amazon S3.
H. Crawl the data using AWS Glue crawler
I. Write an AWS Glue ETL job that merges the two tables and writes the output in CSV format to Amazon S3.

Answer: C

NEW QUESTION 140
A Machine Learning Specialist is designing a system for improving sales for a company. The objective is to use the large amount of information the company has on users' behavior and product preferences to predict which products users would like based on the users' similarity to other users.
What should the Specialist do to meet this objective?

A. Build a content-based filtering recommendation engine with Apache Spark ML on Amazon EMR.
B. Build a collaborative filtering recommendation engine with Apache Spark ML on Amazon EMR.
C. Build a model-based filtering recommendation engine with Apache Spark ML on Amazon EMR.
D. Build a combinative filtering recommendation engine with Apache Spark ML on Amazon EMR.

Answer: B

Explanation:
Many developers want to implement the famous Amazon model that was used to power the "People who bought this also bought these items" feature on Amazon.com. This model is based on a method called Collaborative Filtering. It takes items such as movies, books, and products that were rated highly by a set of users and recommending them to other users who also gave them high ratings. This method works well in domains where explicit ratings or implicit user actions can be gathered and analyzed.

NEW QUESTION 145
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 js 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 cod
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 SageMake
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 146
A machine learning specialist is developing a proof of concept for government users whose primary concern is security. The specialist is using Amazon SageMaker to train a convolutional neural network (CNN) model for a photo classifier application. The specialist wants to protect the data so that it cannot be accessed and transferred to a remote host by malicious code accidentally installed on the training container.
Which action will provide the MOST secure protection?

A. Remove Amazon S3 access permissions from the SageMaker execution role.
B. Encrypt the weights of the CNN model.
C. Encrypt the training and validation dataset.
D. Enable network isolation for training jobs.

Answer: D

NEW QUESTION 151
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 152
A logistics company needs a forecast model to predict next month's inventory requirements for a single item in 10 warehouses. A machine learning specialist uses Amazon Forecast to develop a forecast model from 3 years of monthly data. There is no missing data. The specialist selects the DeepAR+ algorithm to train a predictor. The predictor means absolute percentage error (MAPE) is much larger than the MAPE produced by the current human forecasters.
Which changes to the CreatePredictor API call could improve the MAPE? (Choose two.)

A. Set PerformAutoML to true.
B. Set ForecastHorizon to 4.
C. Set ForecastFrequency to W for weekly.
D. Set PerformHPO to true.
E. Set FeaturizationMethodName to filling.

Answer: CD

NEW QUESTION 153
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 158
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 163
A retail company is selling products through a global online marketplace. The company wants to use machine learning (ML) to analyze customer feedback and identify specific areas for improvement. A developer has built a tool that collects customer reviews from the online marketplace and stores them in an Amazon S3 bucket. This process yields a dataset of 40 reviews. A data scientist building the ML models must identify additional sources of data to increase the size of the dataset.
Which data sources should the data scientist use to augment the dataset of reviews? (Choose three.)

A. Emails exchanged by customers and the company’s customer service agents

B. Social media posts containing the name of the company or its products
C. A publicly available collection of news articles
D. A publicly available collection of customer reviews
E. Product sales revenue figures for the company
F. Instruction manuals for the company's products

Answer: BDF

NEW QUESTION 164
A data scientist needs to identify fraudulent user accounts for a company's ecommerce platform. The company wants the ability to determine if a newly created account is associated with a previously known fraudulent user. The data scientist is using AWS Glue to cleanse the company's application logs during ingestion.
Which strategy will allow the data scientist to identify fraudulent accounts?

A. Execute the built-in FindDuplicates Amazon Athena query.
B. Create a FindMatches machine learning transform in AWS Glue.
C. Create an AWS Glue crawler to infer duplicate accounts in the source data.
D. Search for duplicate accounts in the AWS Glue Data Catalog.

Answer: B

NEW QUESTION 167
A Machine Learning Specialist has built a model using Amazon SageMaker built-in algorithms and is not getting expected accurate results The Specialist wants to use hyperparameter optimization to increase the model's accuracy
Which method is the MOST repeatable and requires the LEAST amount of effort to achieve this?

A. Launch multiple training jobs in parallel with different hyperparameters
B. Create an AWS Step Functions workflow that monitors the accuracy in Amazon CloudWatch Logs and relaunches the training job with a defined list of hyperparameters
C. Create a hyperparameter tuning job and set the accuracy as an objective metric.
D. Create a random walk in the parameter space to iterate through a range of values that should be used for each individual hyperparameter

Answer: B

NEW QUESTION 172
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

Explanation:
Using compressions will reduce the amount of data scanned by Amazon Athena, and also reduce your S3 bucket storage. It's a Win-Win for your AWS bill.
Supported formats: GZIP, LZO, SNAPPY (Parquet) and ZLIB.

NEW QUESTION 173
A Data Science team is designing a dataset repository where it will store a large amount of training data commonly used in its machine learning models. As Data Scientists may create an arbitrary number of new datasets every day the solution has to scale automatically and be cost-effective. Also, it must be possible to explore the data using SQL.
Which storage scheme is MOST adapted to this scenario?

A. Store datasets as files in Amazon S3.
B. Store datasets as files in an Amazon EBS volume attached to an Amazon EC2 instance.
C. Store datasets as tables in a multi-node Amazon Redshift cluster.
D. Store datasets as global tables in Amazon DynamoDB.

Answer: A

NEW QUESTION 176
A data scientist is using the Amazon SageMaker Neural Topic Model (NTM) algorithm to build a model that recommends tags from blog posts. The raw blog post data is stored in an Amazon S3 bucket in JSON format. During model evaluation, the data scientist discovered that the model recommends certain stopwords such as "a," "an," and "the" as tags to certain blog posts, along with a few rare words that are present only in certain blog entries. After a few iterations of tag review with the content team, the data scientist notices that the rare words are unusual but feasible. The data scientist also must ensure that the tag recommendations of the generated model do not include the stopwords.
What should the data scientist do to meet these requirements?

A. Use the Amazon Comprehend entity recognition API operation
B. Remove the detected words from the blog post dat
C. Replace the blog post data source in the S3 bucket.
D. Run the SageMaker built-in principal component analysis (PCA) algorithm with the blog post data from the S3 bucket as the data sourc
E. Replace the blog post data in the S3 bucket with the results of the training job.
F. Use the SageMaker built-in Object Detection algorithm instead of the NTM algorithm for the training job to process the blog post data.
G. Remove the stopwords from the blog post data by using the Count Vectorizer function in the scikit-learnlibrar
H. Replace the blog post data in the S3 bucket with the results of the vectorizer.

Answer: D

NEW QUESTION 177
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 pie-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 180
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: C

NEW QUESTION 182
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