



Amazon-Web-Services

Exam Questions AIF-C01

AWS Certified AI Practitioner

NEW QUESTION 1

An AI practitioner is using an Amazon Bedrock base model to summarize session chats from the customer service department. The AI practitioner wants to store invocation logs to monitor model input and output data.

Which strategy should the AI practitioner use?

- A. Configure AWS CloudTrail as the logs destination for the model.
- B. Enable invocation logging in Amazon Bedrock.
- C. Configure AWS Audit Manager as the logs destination for the model.
- D. Configure model invocation logging in Amazon EventBridge.

Answer: B

Explanation:

Amazon Bedrock provides an option to enable invocation logging to capture and store the input and output data of the models used. This is essential for monitoring and auditing purposes, particularly when handling customer data.

? Option B (Correct): "Enable invocation logging in Amazon Bedrock": This is the correct answer as it directly enables the logging of all model invocations, ensuring transparency and traceability.

? Option A: "Configure AWS CloudTrail" is incorrect because CloudTrail logs API calls but does not provide specific logging for model inputs and outputs.

? Option C: "Configure AWS Audit Manager" is incorrect as Audit Manager is used for compliance reporting, not specific invocation logging for AI models.

? Option D: "Configure model invocation logging in Amazon EventBridge" is incorrect as EventBridge is for event-driven architectures, not specifically designed for logging AI model inputs and outputs.

AWS AI Practitioner References:

? Amazon Bedrock Logging Capabilities: AWS emphasizes using built-in logging features in Bedrock to maintain data integrity and transparency in model operations.

NEW QUESTION 2

A company is building a large language model (LLM) question answering chatbot. The company wants to decrease the number of actions call center employees need to take to respond to customer questions.

Which business objective should the company use to evaluate the effect of the LLM chatbot?

- A. Website engagement rate
- B. Average call duration
- C. Corporate social responsibility
- D. Regulatory compliance

Answer: B

Explanation:

The business objective to evaluate the effect of an LLM chatbot aimed at reducing the actions required by call center employees should be average call duration.

? Average Call Duration:

? Why Option B is Correct:

? Why Other Options are Incorrect:

NEW QUESTION 3

A law firm wants to build an AI application by using large language models (LLMs). The application will read legal documents and extract key points from the documents. Which solution meets these requirements?

- A. Build an automatic named entity recognition system.
- B. Create a recommendation engine.
- C. Develop a summarization chatbot.
- D. Develop a multi-language translation system.

Answer: C

Explanation:

A summarization chatbot is ideal for extracting key points from legal documents. Large language models (LLMs) can be used to summarize complex texts, such as legal documents, making them more accessible and understandable.

? Option C (Correct): "Develop a summarization chatbot": This is the correct answer

because a summarization chatbot uses LLMs to condense and extract key information from text, which is precisely the requirement for reading and summarizing legal documents.

? Option A: "Build an automatic named entity recognition system" is incorrect because it focuses on identifying specific entities, not summarizing documents.

? Option B: "Create a recommendation engine" is incorrect as it is used to suggest products or content, not summarize text.

? Option D: "Develop a multi-language translation system" is incorrect because translation is unrelated to summarizing text.

AWS AI Practitioner References:

? Using LLMs for Text Summarization on AWS: AWS supports developing summarization tools using its AI services, including Amazon Bedrock.

NEW QUESTION 4

A company wants to display the total sales for its top-selling products across various retail locations in the past 12 months.

Which AWS solution should the company use to automate the generation of graphs?

- A. Amazon Q in Amazon EC2
- B. Amazon Q Developer
- C. Amazon Q in Amazon QuickSight
- D. Amazon Q in AWS Chatbot

Answer: C

Explanation:

Amazon QuickSight is a fully managed business intelligence (BI) service that allows users to create and publish interactive dashboards that include visualizations like graphs, charts, and tables. "Amazon Q" is the natural language query feature within Amazon QuickSight. It enables users to ask questions about their data in natural language and receive visual responses such as graphs.

? Option C (Correct): "Amazon Q in Amazon QuickSight": This is the correct answer

because Amazon QuickSight Q is specifically designed to allow users to explore their data through natural language queries, and it can automatically generate graphs to display sales data and other metrics. This makes it an ideal choice for the company to automate the generation of graphs showing total sales for its top-selling products across various retail locations.

? Option A, B, and D: These options are incorrect:

AWS AI Practitioner References:

? Amazon QuickSight Q is designed to provide insights from data by using natural language queries, making it a powerful tool for generating automated graphs and visualizations directly from queried data.

? Business Intelligence (BI) on AWS: AWS services such as Amazon QuickSight

provide business intelligence capabilities, including automated reporting and visualization features, which are ideal for companies seeking to visualize data like sales trends over time.

NEW QUESTION 5

A company uses a foundation model (FM) from Amazon Bedrock for an AI search tool. The company wants to fine-tune the model to be more accurate by using the company's data.

Which strategy will successfully fine-tune the model?

- A. Provide labeled data with the prompt field and the completion field.
- B. Prepare the training dataset by creating a .txt file that contains multiple lines in .csv format.
- C. Purchase Provisioned Throughput for Amazon Bedrock.
- D. Train the model on journals and textbooks.

Answer: A

Explanation:

Providing labeled data with both a prompt field and a completion field is the correct strategy for fine-tuning a foundation model (FM) on Amazon Bedrock.

? Fine-Tuning Strategy:

? Why Option A is Correct:

? Why Other Options are Incorrect:

NEW QUESTION 6

A company wants to assess the costs that are associated with using a large language model (LLM) to generate inferences. The company wants to use Amazon Bedrock to build generative AI applications.

Which factor will drive the inference costs?

- A. Number of tokens consumed
- B. Temperature value
- C. Amount of data used to train the LLM
- D. Total training time

Answer: A

Explanation:

In generative AI models, such as those built on Amazon Bedrock, inference costs are driven by the number of tokens processed. A token can be as short as one character or as long as one word, and the more tokens consumed during the inference process, the higher the cost.

? Option A (Correct): "Number of tokens consumed": This is the correct answer

because the inference cost is directly related to the number of tokens processed by the model.

? Option B: "Temperature value" is incorrect as it affects the randomness of the model's output but not the cost directly.

? Option C: "Amount of data used to train the LLM" is incorrect because training data size affects training costs, not inference costs.

? Option D: "Total training time" is incorrect because it relates to the cost of training the model, not the cost of inference.

AWS AI Practitioner References:

? Understanding Inference Costs on AWS: AWS documentation highlights that inference costs for generative models are largely based on the number of tokens processed.

NEW QUESTION 7

A research company implemented a chatbot by using a foundation model (FM) from Amazon Bedrock. The chatbot searches for answers to questions from a large database of research papers.

After multiple prompt engineering attempts, the company notices that the FM is performing poorly because of the complex scientific terms in the research papers.

How can the company improve the performance of the chatbot?

- A. Use few-shot prompting to define how the FM can answer the questions.
- B. Use domain adaptation fine-tuning to adapt the FM to complex scientific terms.
- C. Change the FM inference parameters.
- D. Clean the research paper data to remove complex scientific terms.

Answer: B

Explanation:

Domain adaptation fine-tuning involves training a foundation model (FM) further using a specific dataset that includes domain-specific terminology and content, such as scientific terms in research papers. This process allows the model to better understand and handle complex terminology, improving its performance on specialized tasks.

? Option B (Correct): "Use domain adaptation fine-tuning to adapt the FM to complex

scientific terms": This is the correct answer because fine-tuning the model on domain-specific data helps it learn and adapt to the specific language and terms used in the research papers, resulting in better performance.

? Option A: "Use few-shot prompting to define how the FM can answer the

questions" is incorrect because while few-shot prompting can help in certain scenarios, it is less effective than fine-tuning for handling complex domain-specific terms.

? Option C: "Change the FM inference parameters" is incorrect because adjusting inference parameters will not resolve the issue of the model's lack of understanding of complex scientific terminology.

? Option D: "Clean the research paper data to remove complex scientific terms" is incorrect because removing the complex terms would result in the loss of important information and context, which is not a viable solution.

AWS AI Practitioner References:

? Domain Adaptation in Amazon Bedrock: AWS recommends fine-tuning models with domain-specific data to improve their performance on specialized tasks involving unique terminology.

NEW QUESTION 8

A company wants to use large language models (LLMs) with Amazon Bedrock to develop a chat interface for the company's product manuals. The manuals are stored as PDF files.

Which solution meets these requirements MOST cost-effectively?

- A. Use prompt engineering to add one PDF file as context to the user prompt when the prompt is submitted to Amazon Bedrock.
- B. Use prompt engineering to add all the PDF files as context to the user prompt when the prompt is submitted to Amazon Bedrock.
- C. Use all the PDF documents to fine-tune a model with Amazon Bedrock.
- D. Use the fine-tuned model to process user prompts.
- E. Upload PDF documents to an Amazon Bedrock knowledge base.
- F. Use the knowledge base to provide context when users submit prompts to Amazon Bedrock.

Answer: A

Explanation:

Using Amazon Bedrock with large language models (LLMs) allows for efficient utilization of AI to answer queries based on context provided in product manuals. To achieve this cost-effectively, the company should avoid unnecessary use of resources.

? Option A (Correct): "Use prompt engineering to add one PDF file as context to the user prompt when the prompt is submitted to Amazon Bedrock": This is the most cost-effective solution. By using prompt engineering, only the relevant content from one PDF file is added as context to each query. This approach minimizes the amount of data processed, which helps in reducing costs associated with LLMs' computational requirements.

? Option B: "Use prompt engineering to add all the PDF files as context to the user prompt when the prompt is submitted to Amazon Bedrock" is incorrect. Including all PDF files would increase costs significantly due to the large context size processed by the model.

? Option C: "Use all the PDF documents to fine-tune a model with Amazon Bedrock" is incorrect. Fine-tuning a model is more expensive than using prompt engineering, especially if done for multiple documents.

? Option D: "Upload PDF documents to an Amazon Bedrock knowledge base" is incorrect because Amazon Bedrock does not have a built-in knowledge base feature for directly managing and querying PDF documents.

AWS AI Practitioner References:

? Prompt Engineering for Cost-Effective AI: AWS emphasizes the importance of using prompt engineering to minimize costs when interacting with LLMs. By carefully selecting relevant context, users can reduce the amount of data processed and save on expenses.

NEW QUESTION 9

Which AWS feature records details about ML instance data for governance and reporting?

- A. Amazon SageMaker Model Cards
- B. Amazon SageMaker Debugger
- C. Amazon SageMaker Model Monitor
- D. Amazon SageMaker JumpStart

Answer: A

Explanation:

Amazon SageMaker Model Cards provide a centralized and standardized repository for documenting machine learning models. They capture key details such as the model's intended use, training and evaluation datasets, performance metrics, ethical considerations, and other relevant information. This documentation facilitates governance and reporting by ensuring that all stakeholders have access to consistent and comprehensive information about each model. While Amazon SageMaker Debugger is used for real-time debugging and monitoring during training, and Amazon SageMaker Model Monitor tracks deployed models for data and prediction quality, neither offers the comprehensive documentation capabilities of Model Cards. Amazon SageMaker JumpStart provides pre-built models and solutions but does not focus on governance documentation.

Reference: Amazon SageMaker Model Cards

NEW QUESTION 10

A company built a deep learning model for object detection and deployed the model to production.

Which AI process occurs when the model analyzes a new image to identify objects?

- A. Training
- B. Inference
- C. Model deployment
- D. Bias correction

Answer: B

Explanation:

Inference is the correct answer because it is the AI process that occurs when a deployed model analyzes new data (such as an image) to make predictions or identify objects.

? Inference:

? Why Option B is Correct:

? Why Other Options are Incorrect:

NEW QUESTION 10

A company deployed an AI/ML solution to help customer service agents respond to frequently asked questions. The questions can change over time. The company wants to give customer service agents the ability to ask questions and receive automatically generated answers to common customer questions. Which strategy will meet these requirements MOST cost-effectively?

- A. Fine-tune the model regularly.
- B. Train the model by using context data.
- C. Pre-train and benchmark the model by using context data.
- D. Use Retrieval Augmented Generation (RAG) with prompt engineering techniques.

Answer: D

Explanation:

RAG combines large pre-trained models with retrieval mechanisms to fetch relevant context from a knowledge base. This approach is cost-effective as it eliminates the need for frequent model retraining while ensuring responses are contextually accurate and up to date. References: AWS RAG Techniques.

NEW QUESTION 12

A company wants to use language models to create an application for inference on edge devices. The inference must have the lowest latency possible. Which solution will meet these requirements?

- A. Deploy optimized small language models (SLMs) on edge devices.
- B. Deploy optimized large language models (LLMs) on edge devices.
- C. Incorporate a centralized small language model (SLM) API for asynchronous communication with edge devices.
- D. Incorporate a centralized large language model (LLM) API for asynchronous communication with edge devices.

Answer: A

Explanation:

To achieve the lowest latency possible for inference on edge devices, deploying optimized small language models (SLMs) is the most effective solution. SLMs require fewer

resources and have faster inference times, making them ideal for deployment on edge devices where processing power and memory are limited.

? Option A (Correct): "Deploy optimized small language models (SLMs) on edge devices": This is the correct answer because SLMs provide fast inference with low latency, which is crucial for edge deployments.

? Option B: "Deploy optimized large language models (LLMs) on edge devices" is incorrect because LLMs are resource-intensive and may not perform well on edge devices due to their size and computational demands.

? Option C: "Incorporate a centralized small language model (SLM) API for asynchronous communication with edge devices" is incorrect because it introduces network latency due to the need for communication with a centralized server.

? Option D: "Incorporate a centralized large language model (LLM) API for asynchronous communication with edge devices" is incorrect for the same reason, with even greater latency due to the larger model size.

AWS AI Practitioner References:

? Optimizing AI Models for Edge Devices on AWS: AWS recommends using small, optimized models for edge deployments to ensure minimal latency and efficient performance.

NEW QUESTION 13

An AI company periodically evaluates its systems and processes with the help of independent software vendors (ISVs). The company needs to receive email message notifications when an ISV's compliance reports become available. Which AWS service can the company use to meet this requirement?

- A. AWS Audit Manager
- B. AWS Artifact
- C. AWS Trusted Advisor
- D. AWS Data Exchange

Answer: D

Explanation:

AWS Data Exchange is a service that allows companies to securely exchange data with third parties, such as independent software vendors (ISVs). AWS Data Exchange can be configured to provide notifications, including email notifications, when new datasets or compliance reports become available.

? Option D (Correct): "AWS Data Exchange": This is the correct answer because it enables the company to receive notifications, including email messages, when ISVs' compliance reports are available.

? Option A: "AWS Audit Manager" is incorrect because it focuses on assessing an organization's own compliance, not receiving third-party compliance reports.

? Option B: "AWS Artifact" is incorrect as it provides access to AWS's compliance reports, not ISVs'.

? Option C: "AWS Trusted Advisor" is incorrect as it offers optimization and best practices guidance, not compliance report notifications.

AWS AI Practitioner References:

? AWS Data Exchange Documentation: AWS explains how Data Exchange allows organizations to subscribe to third-party data and receive notifications when updates are available.

NEW QUESTION 15

A company is building a customer service chatbot. The company wants the chatbot to improve its responses by learning from past interactions and online resources. Which AI learning strategy provides this self-improvement capability?

- A. Supervised learning with a manually curated dataset of good responses and bad responses
- B. Reinforcement learning with rewards for positive customer feedback
- C. Unsupervised learning to find clusters of similar customer inquiries
- D. Supervised learning with a continuously updated FAQ database

Answer: B

Explanation:

Reinforcement learning allows a model to learn and improve over time based on feedback from its environment. In this case, the chatbot can improve its responses by being rewarded for positive customer feedback, which aligns well with the goal of self-improvement based on past interactions and new information.

? Option B (Correct): "Reinforcement learning with rewards for positive customer

feedback": This is the correct answer as reinforcement learning enables the chatbot to learn from feedback and adapt its behavior accordingly, providing self-improvement capabilities.

? Option A: "Supervised learning with a manually curated dataset" is incorrect

because it does not support continuous learning from new interactions.

? Option C: "Unsupervised learning to find clusters of similar customer inquiries" is incorrect because unsupervised learning does not provide a mechanism for improving responses based on feedback.

? Option D: "Supervised learning with a continuously updated FAQ database" is incorrect because it still relies on manually curated data rather than self-improvement from feedback.

AWS AI Practitioner References:

? Reinforcement Learning on AWS: AWS provides reinforcement learning

frameworks that can be used to train models to improve their performance based on feedback.

NEW QUESTION 19

A company wants to use generative AI to increase developer productivity and software development. The company wants to use Amazon Q Developer.

What can Amazon Q Developer do to help the company meet these requirements?

A. Create software snippets, reference tracking, and open-source license tracking.

B. Run an application without provisioning or managing servers.

C. Enable voice commands for coding and providing natural language search.

D. Convert audio files to text documents by using ML models.

Answer: A

Explanation:

Amazon Q Developer is a tool designed to assist developers in increasing productivity by generating code snippets, managing reference tracking, and handling open-source license tracking. These features help developers by automating parts of the software development process.

? Option A (Correct): "Create software snippets, reference tracking, and open-

source license tracking": This is the correct answer because these are key features that help developers streamline and automate tasks, thus improving productivity.

? Option B: "Run an application without provisioning or managing servers" is

incorrect as it refers to AWS Lambda or AWS Fargate, not Amazon Q Developer.

? Option C: "Enable voice commands for coding and providing natural language search" is incorrect because this is not a function of Amazon Q Developer.

? Option D: "Convert audio files to text documents by using ML models" is incorrect as this refers to Amazon Transcribe, not Amazon Q Developer.

AWS AI Practitioner References:

? Amazon Q Developer Features: AWS documentation outlines how Amazon Q Developer supports developers by offering features that reduce manual effort and improve efficiency.

NEW QUESTION 24

Which option is a use case for generative AI models?

A. Improving network security by using intrusion detection systems

B. Creating photorealistic images from text descriptions for digital marketing

C. Enhancing database performance by using optimized indexing

D. Analyzing financial data to forecast stock market trends

Answer: B

Explanation:

Generative AI models are used to create new content based on existing data. One common use case is generating photorealistic images from text descriptions, which is particularly useful in digital marketing, where visual content is key to engaging potential customers.

? Option B (Correct): "Creating photorealistic images from text descriptions for digital

marketing": This is the correct answer because generative AI models, like those offered by Amazon Bedrock, can create images based on text descriptions, making them highly valuable for generating marketing materials.

? Option A: "Improving network security by using intrusion detection systems" is

incorrect because this is a use case for traditional machine learning models, not generative AI.

? Option C: "Enhancing database performance by using optimized indexing" is

incorrect as it is unrelated to generative AI.

? Option D: "Analyzing financial data to forecast stock market trends" is incorrect because it typically involves predictive modeling rather than generative AI.

AWS AI Practitioner References:

? Use Cases for Generative AI Models on AWS: AWS highlights the use of generative AI for creative content generation, including image creation, text generation, and more, which is suited for digital marketing applications.

NEW QUESTION 28

A digital devices company wants to predict customer demand for memory hardware. The company does not have coding experience or knowledge of ML algorithms and needs to develop a data-driven predictive model. The company needs to perform analysis on internal data and external data.

Which solution will meet these requirements?

A. Store the data in Amazon S3. Create ML models and demand forecast predictions by using Amazon SageMaker built-in algorithms that use the data from Amazon S3.

B. Import the data into Amazon SageMaker Data Wrangle

C. Create ML models and demand forecast predictions by using SageMaker built-in algorithms.

D. Import the data into Amazon SageMaker Data Wrangle

E. Build ML models and demand forecast predictions by using an Amazon Personalize Trending-Now recipe.

F. Import the data into Amazon SageMaker Canva

G. Build ML models and demand forecast predictions by selecting the values in the data from SageMaker Canvas.

Answer: D

Explanation:

Amazon SageMaker Canvas is a visual, no-code machine learning interface that allows users to build machine learning models without having any coding experience or knowledge of machine learning algorithms. It enables users to analyze internal and external data, and make predictions using a guided interface.

? Option D (Correct): "Import the data into Amazon SageMaker Canvas. Build ML

models and demand forecast predictions by selecting the values in the data from SageMaker Canvas": This is the correct answer because SageMaker Canvas is designed for users without coding experience, providing a visual interface to build predictive models with ease.

? Option A: "Store the data in Amazon S3 and use SageMaker built-in algorithms" is

incorrect because it requires coding knowledge to interact with SageMaker's built-in algorithms.

? Option B: "Import the data into Amazon SageMaker Data Wrangler" is incorrect.

Data Wrangler is primarily for data preparation and not directly focused on creating ML models without coding.

? Option C: "Use Amazon Personalize Trending-Now recipe" is incorrect as Amazon

Personalize is for building recommendation systems, not for general demand forecasting.

AWS AI Practitioner References:

? Amazon SageMaker Canvas Overview: AWS documentation emphasizes Canvas as a no-code solution for building machine learning models, suitable for business analysts and users with no coding experience.

NEW QUESTION 33

A company manually reviews all submitted resumes in PDF format. As the company grows, the company expects the volume of resumes to exceed the company's review capacity. The company needs an automated system to convert the PDF resumes into plain text format for additional processing.

Which AWS service meets this requirement?

A. Amazon Textract

B. Amazon Personalize

C. Amazon Lex

D. Amazon Transcribe

Answer: A

Explanation:

Amazon Textract is a service that automatically extracts text and data from scanned documents, including PDFs. It is the best choice for converting resumes from PDF format to plain text for further processing.

? Amazon Textract:

? Why Option A is Correct:

? Why Other Options are Incorrect:

NEW QUESTION 38

A company has a database of petabytes of unstructured data from internal sources. The company wants to transform this data into a structured format so that its data scientists can perform machine learning (ML) tasks.

Which service will meet these requirements?

A. Amazon Lex

B. Amazon Rekognition

C. Amazon Kinesis Data Streams

D. AWS Glue

Answer: D

Explanation:

AWS Glue is the correct service for transforming petabytes of unstructured data into a structured format suitable for machine learning tasks.

? AWS Glue:

? Why Option D is Correct:

? Why Other Options are Incorrect:

NEW QUESTION 40

A company is building an ML model. The company collected new data and analyzed the data by creating a correlation matrix, calculating statistics, and visualizing the data.

Which stage of the ML pipeline is the company currently in?

A. Data pre-processing

B. Feature engineering

C. Exploratory data analysis

D. Hyperparameter tuning

Answer: C

Explanation:

Exploratory data analysis (EDA) involves understanding the data by visualizing it, calculating statistics, and creating correlation matrices. This stage helps identify patterns, relationships, and anomalies in the data, which can guide further steps in the ML pipeline.

? Option C (Correct): "Exploratory data analysis": This is the correct answer as the

tasks described (correlation matrix, calculating statistics, visualizing data) are all part of the EDA process.

? Option A: "Data pre-processing" is incorrect because it involves cleaning and

transforming data, not initial analysis.

? Option B: "Feature engineering" is incorrect because it involves creating new features from raw data, not analyzing the data's existing structure.

? Option D: "Hyperparameter tuning" is incorrect because it refers to optimizing model parameters, not analyzing the data.

AWS AI Practitioner References:

? Stages of the Machine Learning Pipeline: AWS outlines EDA as the initial phase of understanding and exploring data before moving to more specific preprocessing, feature engineering, and model training stages.

NEW QUESTION 45

Which functionality does Amazon SageMaker Clarify provide?

- A. Integrates a Retrieval Augmented Generation (RAG) workflow
- B. Monitors the quality of ML models in production
- C. Documents critical details about ML models
- D. Identifies potential bias during data preparation

Answer: D

Explanation:

Exploratory data analysis (EDA) involves understanding the data by visualizing it, calculating statistics, and creating correlation matrices. This stage helps identify patterns, relationships, and anomalies in the data, which can guide further steps in the ML pipeline.

? Option C (Correct): "Exploratory data analysis": This is the correct answer as the tasks described (correlation matrix, calculating statistics, visualizing data) are all part of the EDA process.

? Option A: "Data pre-processing" is incorrect because it involves cleaning and transforming data, not initial analysis.

? Option B: "Feature engineering" is incorrect because it involves creating new features from raw data, not analyzing the data's existing structure.

? Option D: "Hyperparameter tuning" is incorrect because it refers to optimizing model parameters, not analyzing the data.

AWS AI Practitioner References:

? Stages of the Machine Learning Pipeline: AWS outlines EDA as the initial phase of understanding and exploring data before moving to more specific preprocessing, feature engineering, and model training stages.

NEW QUESTION 48

A company wants to build an interactive application for children that generates new stories based on classic stories. The company wants to use Amazon Bedrock and needs to ensure that the results and topics are appropriate for children.

Which AWS service or feature will meet these requirements?

- A. Amazon Rekognition
- B. Amazon Bedrock playgrounds
- C. Guardrails for Amazon Bedrock
- D. Agents for Amazon Bedrock

Answer: C

Explanation:

Amazon Bedrock is a service that provides foundational models for building generative AI applications. When creating an application for children, it is crucial to ensure that the generated content is appropriate for the target audience. "Guardrails" in Amazon Bedrock provide mechanisms to control the outputs and topics of generated content to align with desired safety standards and appropriateness levels.

? Option C (Correct): "Guardrails for Amazon Bedrock": This is the correct answer because guardrails are specifically designed to help users enforce content moderation, filtering, and safety checks on the outputs generated by models in Amazon Bedrock. For a children's application, guardrails ensure that all content generated is suitable and appropriate for the intended audience.

? Option A: "Amazon Rekognition" is incorrect. Amazon Rekognition is an image and video analysis service that can detect inappropriate content in images or videos, but it does not handle text or story generation.

? Option B: "Amazon Bedrock playgrounds" is incorrect because playgrounds are environments for experimenting and testing model outputs, but they do not inherently provide safeguards to ensure content appropriateness for specific audiences, such as children.

? Option D: "Agents for Amazon Bedrock" is incorrect. Agents in Amazon Bedrock facilitate building AI applications with more interactive capabilities, but they do not provide specific guardrails for ensuring content appropriateness for children.

AWS AI Practitioner References:

? Guardrails in Amazon Bedrock: Designed to help implement controls that ensure generated content is safe and suitable for specific use cases or audiences, such as children, by moderating and filtering inappropriate or undesired content.

? Building Safe AI Applications: AWS provides guidance on implementing ethical AI practices, including using guardrails to protect against generating inappropriate or biased content.

NEW QUESTION 52

A financial institution is using Amazon Bedrock to develop an AI application. The application is hosted in a VPC. To meet regulatory compliance standards, the VPC is not allowed access to any internet traffic.

Which AWS service or feature will meet these requirements?

- A. AWS PrivateLink
- B. Amazon Macie
- C. Amazon CloudFront
- D. Internet gateway

Answer: A

Explanation:

AWS PrivateLink enables private connectivity between VPCs and AWS services without exposing traffic to the public internet. This feature is critical for meeting regulatory compliance standards that require isolation from public internet traffic.

? Option A (Correct): "AWS PrivateLink": This is the correct answer because it allows secure access to Amazon Bedrock and other AWS services from a VPC without internet access, ensuring compliance with regulatory standards.

? Option B: "Amazon Macie" is incorrect because it is a security service for data classification and protection, not for managing private network traffic.

? Option C: "Amazon CloudFront" is incorrect because it is a content delivery network service and does not provide private network connectivity.

? Option D: "Internet gateway" is incorrect as it enables internet access, which violates the VPC's no-internet-traffic policy.

AWS AI Practitioner References:

? AWS PrivateLink Documentation: AWS highlights PrivateLink as a solution for connecting VPCs to AWS services privately, which is essential for organizations with strict regulatory requirements.

NEW QUESTION 53

A company has terabytes of data in a database that the company can use for business analysis. The company wants to build an AI-based application that can build a SQL query from input text that employees provide. The employees have minimal experience with technology. Which solution meets these requirements?

- A. Generative pre-trained transformers (GPT)
- B. Residual neural network
- C. Support vector machine
- D. WaveNet

Answer: A

Explanation:

Generative Pre-trained Transformers (GPT) are suitable for building an AI-based application that can generate SQL queries from natural language input provided by employees.

? GPT for Natural Language Processing:

? Why Option A is Correct:

? Why Other Options are Incorrect:

NEW QUESTION 54

An e-commerce company wants to build a solution to determine customer sentiments based on written customer reviews of products. Which AWS services meet these requirements? (Select TWO.)

- A. Amazon Lex
- B. Amazon Comprehend
- C. Amazon Polly
- D. Amazon Bedrock
- E. Amazon Rekognition

Answer: BD

Explanation:

To determine customer sentiments based on written customer reviews, the company can use Amazon Comprehend and Amazon Bedrock.

? Amazon Comprehend:

? Amazon Bedrock:

? Why Other Options are Incorrect:

NEW QUESTION 58

A company is using domain-specific models. The company wants to avoid creating new models from the beginning. The company instead wants to adapt pre-trained models to create models for new, related tasks. Which ML strategy meets these requirements?

- A. Increase the number of epochs.
- B. Use transfer learning.
- C. Decrease the number of epochs.
- D. Use unsupervised learning.

Answer: B

Explanation:

Transfer learning is the correct strategy for adapting pre-trained models for new, related tasks without creating models from scratch.

? Transfer Learning:

? Why Option B is Correct:

? Why Other Options are Incorrect:

NEW QUESTION 63

A large retailer receives thousands of customer support inquiries about products every day. The customer support inquiries need to be processed and responded to quickly. The company wants to implement Agents for Amazon Bedrock. What are the key benefits of using Amazon Bedrock agents that could help this retailer?

- A. Generation of custom foundation models (FMs) to predict customer needs
- B. Automation of repetitive tasks and orchestration of complex workflows
- C. Automatically calling multiple foundation models (FMs) and consolidating the results
- D. Selecting the foundation model (FM) based on predefined criteria and metrics

Answer: B

Explanation:

Amazon Bedrock Agents provide the capability to automate repetitive tasks and orchestrate complex workflows using generative AI models. This is particularly beneficial for customer support inquiries, where quick and efficient processing is crucial.

? Option B (Correct): "Automation of repetitive tasks and orchestration of complex workflows": This is the correct answer because Bedrock Agents can automate common customer service tasks and streamline complex processes, improving response times and efficiency.

? Option A: "Generation of custom foundation models (FMs) to predict customer needs" is incorrect as Bedrock agents do not create custom models.

? Option C: "Automatically calling multiple foundation models (FMs) and consolidating the results" is incorrect because Bedrock agents focus on task automation rather than combining model outputs.

? Option D: "Selecting the foundation model (FM) based on predefined criteria and metrics" is incorrect as Bedrock agents are not designed for selecting models.

AWS AI Practitioner References:

? Amazon Bedrock Documentation: AWS explains that Bedrock Agents automate tasks and manage complex workflows, making them ideal for customer support automation.

NEW QUESTION 68

A company wants to develop an educational game where users answer questions such as the following: "A jar contains six red, four green, and three yellow marbles. What is the probability of choosing a green marble from the jar?"
Which solution meets these requirements with the LEAST operational overhead?

- A. Use supervised learning to create a regression model that will predict probability.
- B. Use reinforcement learning to train a model to return the probability.
- C. Use code that will calculate probability by using simple rules and computations.
- D. Use unsupervised learning to create a model that will estimate probability density.

Answer: C

Explanation:

The problem involves a simple probability calculation that can be handled efficiently by straightforward mathematical rules and computations. Using machine learning techniques would introduce unnecessary complexity and operational overhead.

? Option C (Correct): "Use code that will calculate probability by using simple rules and computations": This is the correct answer because it directly solves the problem with minimal overhead, using basic probability rules.

? Option A: "Use supervised learning to create a regression model" is incorrect as it overcomplicates the solution for a simple probability problem.

? Option B: "Use reinforcement learning to train a model" is incorrect because reinforcement learning is not needed for a simple probability calculation.

? Option D: "Use unsupervised learning to create a model" is incorrect as unsupervised learning is not applicable to this task.

AWS AI Practitioner References:

? Choosing the Right Solution for AI Tasks: AWS recommends using the simplest and most efficient approach to solve a given problem, avoiding unnecessary machine learning techniques for straightforward tasks.

NEW QUESTION 70

A company needs to train an ML model to classify images of different types of animals. The company has a large dataset of labeled images and will not label more data. Which type of learning should the company use to train the model?

- A. Supervised learning.
- B. Unsupervised learning.
- C. Reinforcement learning.
- D. Active learning.

Answer: A

Explanation:

Supervised learning is appropriate when the dataset is labeled. The model uses this data to learn patterns and classify images. Unsupervised learning, reinforcement learning, and active learning are not suitable since they either require unlabeled data or different problem settings. References: AWS Machine Learning Best Practices.

NEW QUESTION 73

A pharmaceutical company wants to analyze user reviews of new medications and provide a concise overview for each medication. Which solution meets these requirements?

- A. Create a time-series forecasting model to analyze the medication reviews by using Amazon Personalize.
- B. Create medication review summaries by using Amazon Bedrock large language models (LLMs).
- C. Create a classification model that categorizes medications into different groups by using Amazon SageMaker.
- D. Create medication review summaries by using Amazon Rekognition.

Answer: B

Explanation:

Amazon Bedrock provides large language models (LLMs) that are optimized for natural language understanding and text summarization tasks, making it the best choice for creating concise summaries of user reviews. Time-series forecasting, classification, and image analysis (Rekognition) are not suitable for summarizing textual data. References: AWS Bedrock Documentation.

NEW QUESTION 78

A company is building a solution to generate images for protective eyewear. The solution must have high accuracy and must minimize the risk of incorrect annotations.
Which solution will meet these requirements?

- A. Human-in-the-loop validation by using Amazon SageMaker Ground Truth Plus
- B. Data augmentation by using an Amazon Bedrock knowledge base
- C. Image recognition by using Amazon Rekognition
- D. Data summarization by using Amazon QuickSight

Answer: A

Explanation:

Amazon SageMaker Ground Truth Plus is a managed data labeling service that includes human-in-the-loop (HITL) validation. This solution ensures high accuracy by involving human reviewers to validate the annotations and reduce the risk of incorrect annotations.

? Amazon SageMaker Ground Truth Plus:

? Why Option A is Correct:

? Why Other Options are Incorrect:

Thus, A is the correct answer for generating high-accuracy images with minimized annotation risks.

NEW QUESTION 82

Which option is a benefit of using Amazon SageMaker Model Cards to document AI models?

- A. Providing a visually appealing summary of a model's capabilities.
- B. Standardizing information about a model's purpose, performance, and limitations.
- C. Reducing the overall computational requirements of a model.
- D. Physically storing models for archival purposes.

Answer: B

Explanation:

Amazon SageMaker Model Cards provide a standardized way to document important details about an AI model, such as its purpose, performance, intended usage, and known limitations. This enables transparency and compliance while fostering better communication between stakeholders. It does not store models physically or optimize computational requirements. References: AWS SageMaker Model Cards Documentation.

NEW QUESTION 86

An AI practitioner is building a model to generate images of humans in various professions. The AI practitioner discovered that the input data is biased and that specific attributes affect the image generation and create bias in the model. Which technique will solve the problem?

- A. Data augmentation for imbalanced classes
- B. Model monitoring for class distribution
- C. Retrieval Augmented Generation (RAG)
- D. Watermark detection for images

Answer: A

Explanation:

Data augmentation for imbalanced classes is the correct technique to address bias in input data affecting image generation.

? Data Augmentation for Imbalanced Classes:

? Why Option A is Correct:

? Why Other Options are Incorrect:

NEW QUESTION 87

Which option is a benefit of ongoing pre-training when fine-tuning a foundation model (FM)?

- A. Helps decrease the model's complexity
- B. Improves model performance over time
- C. Decreases the training time requirement
- D. Optimizes model inference time

Answer: B

Explanation:

Ongoing pre-training when fine-tuning a foundation model (FM) improves model performance over time by continuously learning from new data.

? Ongoing Pre-Training:

? Why Option B is Correct:

? Why Other Options are Incorrect:

NEW QUESTION 92

A company has built a chatbot that can respond to natural language questions with images. The company wants to ensure that the chatbot does not return inappropriate or unwanted images. Which solution will meet these requirements?

- A. Implement moderation APIs.
- B. Retrain the model with a general public dataset.
- C. Perform model validation.
- D. Automate user feedback integration.

Answer: A

Explanation:

Moderation APIs, such as Amazon Rekognition's Content Moderation API, can help filter and block inappropriate or unwanted images from being returned by a chatbot. These APIs are specifically designed to detect and manage undesirable content in images.

? Option A (Correct): "Implement moderation APIs": This is the correct answer because moderation APIs are designed to identify and filter inappropriate content, ensuring the chatbot does not return unwanted images.

? Option B: "Retrain the model with a general public dataset" is incorrect because retraining does not directly prevent inappropriate content from being returned.

? Option C: "Perform model validation" is incorrect as it ensures model correctness, not content moderation.

? Option D: "Automate user feedback integration" is incorrect because user feedback does not prevent inappropriate images in real-time.

AWS AI Practitioner References:

? AWS Content Moderation Services: AWS provides moderation APIs for filtering unwanted content from applications.

NEW QUESTION 96

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