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CompTIA

About CertyIQ

We here at CertyIQ eventually got enough of the industry's greedy exam paid for. Our team of IT professionals comes with years of experience in the IT industry Prior to training CertyIQ we worked in test areas where we observed the horrors of the paywall exam preparation system.

The misuse of the preparation system has left our team disillusioned. And for that reason, we decided it was time to make a difference. We had to make In this way, CertyIQ was created to provide quality materials without stealing from everyday people who are trying to make a living.

Doubt Support

We have developed a very scalable solution using which we are able to solve 400+ doubts every single day with an average rating of 4.8 out of 5.

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John

October 19, 2022



Thanks you so much for your help. I scored 972 in my exam today. More than 90% were from your PDFs!

October 22, 2022



Passed my exam today with 891 marks. Out of 52 questions, 51 were from certyiq PDFs including Contoso case study. Thank You certyiq team!

Dana

September 04, 2022



Thanks a lot for this updated AZ-900 Q&A. I just passed my exam and got 974, I followed both of your Az-900 videos and the 6 PDF, the PDFs are very much valid, all answers are correct. Could you please create a similar video/PDF for DP900, your content/PDF's is really awesome. The team did a really good job. Thank You 😊.

Henry Rome

2 months ago



These questions are real and 100 % valid. Thank you so much for your efforts, also your 4 PDFs are awesome, I passed the DP900 exam on 1 Sept. With 968 marks. Thanks a lot, buddy!

Esmaria

2 months ago



Simple easy to understand explanations. To anyone out there wanting to write AZ900, I highly recommend 6 PDF's. Thank you so much, appreciate all your hard work in having such great content. Passed my exam Today - 3 September with 942 score.

Ahamed Shibly

2 months ago



Customer support is realy fast and helpful, I just finished my exam and this video along with the 6 PDF helped me pass! Definitely recommend getting the PDFs. Thank you!



(AI-900)

Microsoft Azure AI Fundamentals

Total: **243 Questions**

Link: <https://certiq.com/papers?provider=microsoft&exam=ai-900>

Question: 1

CertyIQ

A company employs a team of customer service agents to provide telephone and email support to customers. The company develops a webchat bot to provide automated answers to common customer queries. Which business benefit should the company expect as a result of creating the webchat bot solution?

- A. increased sales
- B. a reduced workload for the customer service agents
- C. improved product reliability

Answer: B**Explanation:**

Correct answer is B: a reduced workload for the customer service agents.

Question: 2

CertyIQ

For a machine learning progress, how should you split data for training and evaluation?

- A. Use features for training and labels for evaluation.
- B. Randomly split the data into rows for training and rows for evaluation.
- C. Use labels for training and features for evaluation.
- D. Randomly split the data into columns for training and columns for evaluation.

Answer: B**Explanation:**

You split rows not columns:

The Split Data module is particularly useful when you need to separate data into training and testing sets. Use the Split Rows option if you want to divide the data into two parts. You can specify the percentage of data to put in each split, but by default, the data is divided 50-50. You can also randomize the selection of rows in each group, and use stratified sampling.

Reference:

<https://docs.microsoft.com/en-us/azure/machine-learning/studio-module-reference/split-data>

Question: 3

CertyIQ

HOTSPOT -

You are developing a model to predict events by using classification.

You have a confusion matrix for the model scored on test data as shown in the following exhibit.

Actual

Predicted	0	1
0	1033	13951
1	11	5

Use the drop-down menus to select the answer choice that completes each statement based on the information presented in the graphic.

NOTE: Each correct selection is worth one point.

Hot Area:

Answer Area

There are **[answer choice]** correctly predicted positives.

▼

5
11
1,033
13,951

There are **[answer choice]** false negatives.

▼

5
11
1,033
13,951

Answer:

Answer Area

There are [answer choice] correctly predicted positives.

5
11
1,033
13,951

There are [answer choice] false negatives.

5
11
1,033
13,951

Explanation:

Box 1: 11 -

		Predicted	
		Positive	Negative
Actual True	TP	FN	
	FP	TN	

TP = True Positive.

The class labels in the training set can take on only two possible values, which we usually refer to as positive or negative. The positive and negative instances that a classifier predicts correctly are called true positives (TP) and true negatives (TN), respectively. Similarly, the incorrectly classified instances are called false positives (FP) and false negatives (FN).

Box 2: 1,033 -

FN = False Negative -

Reference:

<https://docs.microsoft.com/en-us/azure/machine-learning/studio/evaluate-model-performance>

Question: 4

You build a machine learning model by using the automated machine learning user interface (UI).

You need to ensure that the model meets the Microsoft transparency principle for responsible AI. What should you do?

- A. Set Validation type to Auto.
- B. Enable Explain best model.
- C. Set Primary metric to accuracy.
- D. Set Max concurrent iterations to 0.

Answer: B

Explanation:

Model Explain Ability.

Most businesses run on trust and being able to open the ML black box helps build transparency and trust. In heavily regulated industries like healthcare and banking, it is critical to comply with regulations and best practices. One key aspect of this is understanding the relationship between input variables (features) and model output. Knowing both the magnitude and direction of the impact each feature (feature importance) has on the predicted value helps better understand and explain the model. With model explainability, we enable you to understand feature importance as part of automated ML runs.

Reference:

<https://azure.microsoft.com/en-us/blog/new-automated-machine-learning-capabilities-in-azure-machine-learning-service/>

Question: 5

CertyIQ

HOTSPOT -

For each of the following statements, select Yes if the statement is true. Otherwise, select No.

NOTE: Each correct selection is worth one point.

Hot Area:

Answer Area

Statements	Yes	No
Forecasting housing prices based on historical data is an example of anomaly detection.	<input type="radio"/>	<input type="radio"/>
Identifying suspicious sign-ins by looking for deviations from usual patterns is an example of anomaly detection.	<input type="radio"/>	<input type="radio"/>
Predicting whether a patient will develop diabetes based on the patient's medical history is an example of anomaly detection.	<input type="radio"/>	<input type="radio"/>

Answer:

Answer Area

Statements	Yes	No
Forecasting housing prices based on historical data is an example of anomaly detection.	<input type="radio"/>	<input checked="" type="radio"/>
Identifying suspicious sign-ins by looking for deviations from usual patterns is an example of anomaly detection.	<input checked="" type="radio"/>	<input type="radio"/>
Predicting whether a patient will develop diabetes based on the patient's medical history is an example of anomaly detection.	<input type="radio"/>	<input checked="" type="radio"/>

Explanation:

A - Regression

B - Anomaly

C - Classification

Anomaly detection encompasses many important tasks in machine learning:

Identifying transactions that are potentially fraudulent.

Learning patterns that indicate that a network intrusion has occurred.

Finding abnormal clusters of patients.

Checking values entered into a system.

Reference:

<https://docs.microsoft.com/en-us/azure/machine-learning/studio-module-reference/anomaly-detection>

Question: 6

CertyIQ

HOTSPOT -

To complete the sentence, select the appropriate option in the answer area.

Hot Area:

Answer Area

The handling of unusual or missing values provided to an AI system is a consideration for the Microsoft principle for responsible AI.

- inclusiveness
- privacy and security
- reliability and safety
- transparency

Answer:

Answer Area

The handling of unusual or missing values provided to an AI system is a consideration for the Microsoft principle for responsible AI.

inclusiveness
privacy and security
reliability and safety
transparency

Explanation:

Reliability and safety:

AI systems need to be reliable and safe in order to be trusted. It is important for a system to perform as it was originally designed and for it to respond safely to new situations. Its inherent resilience should resist intended or unintended manipulation. Rigorous testing and validation should be established for operating conditions to ensure that the system responds safely to edge cases, and A/B testing and champion/challenger methods should be integrated into the evaluation process.

An AI system's performance can degrade over time, so a robust monitoring and model tracking process needs to be established to reactively and proactively measure the model's performance and retrain it, as necessary, to modernize it.

Reference:

<https://docs.microsoft.com/en-us/azure/cloud-adoption-framework/innovate/best-practices/trusted-ai>

Question: 7

CertyIQ

DRAG DROP -

Match the types of AI workloads to the appropriate scenarios.

To answer, drag the appropriate workload type from the column on the left to its scenario on the right. Each workload type may be used once, more than once, or not at all.

NOTE: Each correct selection is worth one point.

Select and Place:

Workloads Types

Anomaly detection

Computer vision

Conversational AI

Knowledge mining

Natural language processing

Answer Area

Workload Type

An automated chat to answer questions about refunds and exchange

Workload Type

Determining whether a photo contains a person

Workload Type

Determining whether a review is positive or negative

Answer:

Workloads Types	Answer Area
Anomaly detection	Conversational AI
Computer vision	Computer vision
Conversational AI	Natural language processing
Knowledge mining	
Natural language processing	

Explanation:

Box 3: Natural language processing

Natural language processing (NLP) is used for tasks such as sentiment analysis, topic detection, language detection, key phrase extraction, and document categorization.

What is Natural Language Processing?

Natural language processing (NLP) is the area of AI that deals with creating software that understands written and spoken language.

NLP enables you to create software that can:

- Analyze text documents to extract key phrases and recognize entities (such as places, dates, or people). ie Text Analytics service
- Perform sentiment analysis to determine how positive or negative the language used in a document is. ie Text Analytics service
- Interpret spoken language, and synthesize speech responses. ie Speech service(speech to text and text to speech)
- Automatically translate spoken or written phrases between languages. ie Text service(for text to text translation)/Speech service(for speech to text/speech translation)

Interpret commands and determine appropriate actions. ie Language Understanding(LUIS) service

Reference:

<https://docs.microsoft.com/en-us/azure/architecture/data-guide/technology-choices/natural-language-processing>

Question: 8

CertyIQ

You are designing an AI system that empowers everyone, including people who have hearing, visual, and other impairments.

This is an example of which Microsoft guiding principle for responsible AI?

- A. fairness
- B. inclusiveness
- C. reliability and safety
- D. accountability

Answer: B**Explanation:**

Inclusiveness: At Microsoft, we firmly believe everyone should benefit from intelligent technology, meaning it must incorporate and address a broad range of human needs and experiences. For the 1 billion people with disabilities around the world, AI technologies can be a game-changer.

Reference:

<https://docs.microsoft.com/en-us/learn/modules/responsible-ai-principles/4-guiding-principles>

Question: 9**CertyIQ****DRAG DROP -**

Match the Microsoft guiding principles for responsible AI to the appropriate descriptions.

To answer, drag the appropriate principle from the column on the left to its description on the right. Each principle may be used once, more than once, or not at all.

NOTE: Each correct selection is worth one point.

Select and Place:

Principles	Answer Area
Accountability	Principle Ensure that AI systems operate as they were originally designed, respond to unanticipated conditions, and resist harmful manipulation.
Fairness	Principle Implementing processes to ensure that decisions made by AI systems can be overridden by humans.
Inclusiveness	Principle Provide consumers with information and controls over the collection, use, and storage of their data.
Privacy and security	
Reliability and safety	

Answer:

Principles	Answer Area
Accountability	Reliability and safety Ensure that AI systems operate as they were originally designed, respond to unanticipated conditions, and resist harmful manipulation.
Fairness	Accountability Implementing processes to ensure that decisions made by AI systems can be overridden by humans.
Inclusiveness	
Privacy and security	Privacy and security Provide consumers with information and controls over the collection, use, and storage of their data.
Reliability and safety	

Explanation:

Box 1: Reliability and safety -

To build trust, it's critical that AI systems operate reliably, safely, and consistently under normal circumstances and in unexpected conditions. These systems should be able to operate as they were originally designed, respond safely to unanticipated conditions, and resist harmful manipulation.

Box 2: Accountability -

The people who design and deploy AI systems must be accountable for how their systems operate.

Organizations should draw upon industry standards to develop accountability norms. These norms can ensure that AI systems are not the final authority on any decision that impacts people's lives and that humans maintain meaningful control over otherwise highly autonomous AI systems.

Box 3: Privacy and security -

As AI becomes more prevalent, protecting privacy and securing important personal and business information is becoming more critical and complex. With AI, privacy and data security issues require especially close attention because access to data is essential for AI systems to make accurate and informed predictions and decisions about people. AI systems must comply with privacy laws that require transparency about the collection, use, and storage of data and mandate that consumers have appropriate controls to choose how their data is used

Reference:

<https://docs.microsoft.com/en-us/learn/modules/responsible-ai-principles/4-guiding-principles>

Question: 10

CertyIQ

HOTSPOT -

To complete the sentence, select the appropriate option in the answer area.

Hot Area:

When developing an AI system for self-driving cars, the Microsoft for responsible AI should be applied to ensure consistent operation system during unexpected circumstances.

inclusiveness
accountability
reliability and safety
fairness

principle
of the

Answer:

When developing an AI system for self-driving cars, the Microsoft for responsible AI should be applied to ensure consistent operation system during unexpected circumstances.

inclusiveness
accountability
reliability and safety
fairness

principle
of the

Explanation:

Reliability and safety: To build trust, it's critical that AI systems operate reliably, safely, and consistently under normal circumstances and in unexpected conditions.

These systems should be able to operate as they were originally designed, respond safely to unanticipated conditions, and resist harmful manipulation.

Reference:

<https://docs.microsoft.com/en-us/learn/modules/responsible-ai-principles/4-guiding-principles>

Question: 11

CertyIQ

You are building an AI system.

Which task should you include to ensure that the service meets the Microsoft transparency principle for responsible AI?

- A. Ensure that all visuals have an associated text that can be read by a screen reader.
- B. Enable autoscaling to ensure that a service scales based on demand.

- C. Provide documentation to help developers debug code.
 D. Ensure that a training dataset is representative of the population.

Answer: C

Explanation:

Reference:

<https://docs.microsoft.com/en-us/learn/modules/responsible-ai-principles/4-guiding-principles>

Question: 12

CertyIQ

DRAG DROP -

Match the types of AI workloads to the appropriate scenarios.

To answer, drag the appropriate workload type from the column on the left to its scenario on the right. Each workload type may be used once, more than once, or not at all.

NOTE: Each correct selection is worth one point.

Select and Place:

Workload Types	Answer Area
Anomaly detection	Workload Type
Computer vision	Workload Type
Machine Learning (Regression)	Workload Type
Natural language processing	Workload Type

Identify handwritten letters.
 Predict the sentiment of a social media post.
 Identify a fraudulent credit card payment.
 Predict next month's toy sales.

Answer:

Workload Types	Answer Area
Anomaly detection	Computer vision
Computer vision	Natural language processing
Machine Learning (Regression)	Anomaly detection
Natural language processing	Machine Learning (Regression)

Identify handwritten letters.
 Predict the sentiment of a social media post.
 Identify a fraudulent credit card payment.
 Predict next month's toy sales.

Explanation:

Keywords:

Computer vision = identify (object) letters

NLP = sentiment

Anomaly Detection = fraud

Machine Learning (regression) = predict

Reference:

Question: 13

Your company is exploring the use of voice recognition technologies in its smart home devices. The company wants to identify any barriers that might unintentionally leave out specific user groups. This is an example of which Microsoft guiding principle for responsible AI?

- A. accountability
- B. fairness
- C. inclusiveness
- D. privacy and security

Answer: C

Explanation:

C - Inclusiveness. No one is left out (disabled, gender, ethnicity, LGBTQIA+ etc etc)

Reference:

<https://docs.microsoft.com/en-us/learn/modules/responsible-ai-principles/4-guiding-principles>

Question: 14

What are three Microsoft guiding principles for responsible AI? Each correct answer presents a complete solution.
NOTE: Each correct selection is worth one point.

- A. knowledgeability
- B. decisiveness
- C. inclusiveness
- D. fairness
- E. opinionatedness
- F. reliability and safety

Answer: CDF

Explanation:

The six guiding principles are:

1. Fairness
2. Inclusiveness
3. Transparency
4. Privacy and Security
5. Reliability and Safety
6. Accountability

Reference:

Question: 15

HOTSPOT -

To complete the sentence, select the appropriate option in the answer area.

Hot Area:

Answer Area

Returning a bounding box that indicates the location of a vehicle in an image is an example of

- image classification.
- object detection.
- optical character recognizer (OCR).
- semantic segmentation.

Answer:

Answer Area

Returning a bounding box that indicates the location of a vehicle in an image is an example of

- image classification.
- object detection.
- optical character recognizer (OCR).
- semantic segmentation.

Explanation:

Object detection is correct. Semantic segmentation can seem tempting at first but that is more about classifying individual pixels based on their objects

Reference:

<https://docs.microsoft.com/en-us/azure/cognitive-services/computer-vision/concept-object-detection>

HOTSPOT -

To complete the sentence, select the appropriate option in the answer area.

Hot Area:

Answer Area

is used to generate additional features.

- Feature engineering
- Feature selection
- Model evaluation
- Model training

Answer:**Answer Area**

is used to generate additional features.

- Feature engineering
- Feature selection
- Model evaluation
- Model training

Explanation:**Answer is Feature Engineering.**

Explanation - feature engineering is applied first to generate additional features, and then feature selection is done to eliminate irrelevant, redundant, or highly correlated features.

Reference:

<https://docs.microsoft.com/en-us/azure/machine-learning/team-data-science-process/create-features>

You run a charity event that involves posting photos of people wearing sunglasses on Twitter.

You need to ensure that you only retweet photos that meet the following requirements:

- ⇒ Include one or more faces.
- ⇒ Contain at least one person wearing sunglasses.

What should you use to analyze the images?

- A. the Verify operation in the Face service
- B. the Detect operation in the Face service
- C. the Describe Image operation in the Computer Vision service
- D. the Analyze Image operation in the Computer Vision service

Answer: B

Explanation:

Face detect can be requested to detect also glasses attribute

Reference:

<https://docs.microsoft.com/en-us/azure/cognitive-services/face/overview>

Question: 18

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When you design an AI system to assess whether loans should be approved, the factors used to make the decision should be explainable.

This is an example of which Microsoft guiding principle for responsible AI?

- A. transparency
- B. inclusiveness
- C. fairness
- D. privacy and security

Answer: A

Explanation:

Achieving transparency helps the team to understand the data and algorithms used to train the model, what transformation logic was applied to the data, the final model generated, and its associated assets. This information offers insights about how the model was created, which allows it to be reproduced in a transparent way.

Incorrect Answers:

B: Inclusiveness mandates that AI should consider all human races and experiences, and inclusive design practices can help developers to understand and address potential barriers that could unintentionally exclude people. Where possible, speech-to-text, text-to-speech, and visual recognition technology should be used to empower people with hearing, visual, and other impairments.

C: Fairness is a core ethical principle that all humans aim to understand and apply. This principle is even more important when AI systems are being developed.

Key checks and balances need to make sure that the system's decisions don't discriminate or run a gender, race, sexual orientation, or religion bias toward a group or individual.

D: A data holder is obligated to protect the data in an AI system, and privacy and security are an integral part of this system. Personal needs to be secured, and it should be accessed in a way that doesn't compromise an individual's privacy.

Reference:

<https://docs.microsoft.com/en-us/azure/cloud-adoption-framework/innovate/best-practices/trusted-ai> <https://docs.microsoft.com/en-us/azure/cloud-adoption-framework/strategy/responsible-ai>

Question: 19

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HOTSPOT -

For each of the following statements, select Yes if the statement is true. Otherwise, select No.

NOTE: Each correct selection is worth one point.

Hot Area:

Answer Area

Statements	Yes	No
Providing an explanation of the outcome of a credit loan application is an example of the Microsoft transparency principle for responsible AI.	<input type="radio"/>	<input type="radio"/>
A triage bot that prioritizes insurance claims based on injuries is an example of the Microsoft reliability and safety principle for responsible AI.	<input type="radio"/>	<input type="radio"/>
An AI solution that is offered at different prices for different sales territories is an example of the Microsoft inclusiveness principle for responsible AI.	<input type="radio"/>	<input type="radio"/>

Answer:

Answer Area

Statements	Yes	No
Providing an explanation of the outcome of a credit loan application is an example of the Microsoft transparency principle for responsible AI.	<input checked="" type="radio"/>	<input type="radio"/>
A triage bot that prioritizes insurance claims based on injuries is an example of the Microsoft reliability and safety principle for responsible AI.	<input type="radio"/>	<input checked="" type="radio"/>
An AI solution that is offered at different prices for different sales territories is an example of the Microsoft inclusiveness principle for responsible AI.	<input type="radio"/>	<input checked="" type="radio"/>

Explanation:

Box 1: Yes -

Achieving transparency helps the team to understand the data and algorithms used to train the model, what transformation logic was applied to the data, the final model generated, and its associated assets. This information offers insights about how the model was created, which allows it to be reproduced in a transparent way.

Box 2: No -

A data holder is obligated to protect the data in an AI system, and privacy and security are an integral part of this system. Personal needs to be secured, and it should be accessed in a way that doesn't compromise an individual's privacy.

Box 3: No -

Inclusiveness mandates that AI should consider all human races and experiences, and inclusive design practices can help developers to understand and address potential barriers that could unintentionally exclude people. Where possible, speech-to-text, text-to-speech, and visual recognition technology should be used to empower people with hearing, visual, and other impairments.

Reference:

<https://docs.microsoft.com/en-us/azure/cloud-adoption-framework/innovate/best-practices/trusted-ai>

DRAG DROP -

Match the principles of responsible AI to appropriate requirements.

To answer, drag the appropriate principles from the column on the left to its requirement on the right. Each principle may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

NOTE: Each correct selection is worth one point.

Select and Place:

Principles	Answer Area
Fairness	The system must not discriminate based on gender, race
Privacy and security	Personal data must be visible only to approve
Reliability and safety	
Transparency	Automated decision-making processes must be recorded so that approved users can identify why a decision was made

Answer:

Principles	Answer Area
Fairness	The system must not discriminate based on gender, race
Privacy and security	Personal data must be visible only to approve
Reliability and safety	
Transparency	Automated decision-making processes must be recorded so that approved users can identify why a decision was made

Explanation:

Reference:

<https://docs.microsoft.com/en-us/azure/cloud-adoption-framework/innovate/best-practices/trusted-ai>

<https://docs.microsoft.com/en-us/learn/modules/responsible-ai-principles/4-guiding-principles>

1. <https://docs.microsoft.com/en-us/azure/cloud-adoption-framework/innovate/best-practices/trusted-ai>

2. <https://docs.microsoft.com/en-us/learn/modules/responsible-ai-principles/4-guiding-principles>

Question: 21

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DRAG DROP -

You plan to deploy an Azure Machine Learning model as a service that will be used by client applications.

Which three processes should you perform in sequence before you deploy the model? To answer, move the appropriate processes from the list of processes to the answer area and arrange them in the correct order.

Select and Place:

Processes

Answer Area

data encryption

model retraining

model training

data preparation

model evaluation



Answer:

Processes

data encryption

model retraining

Answer Area

data preparation

model training

model evaluation

Explanation:

Data Prep

Train Model

Evaluate Model

Reference:

Question: 22

You are building an AI-based app.

You need to ensure that the app uses the principles for responsible AI.

Which two principles should you follow? Each correct answer presents part of the solution.

NOTE: Each correct selection is worth one point.

- A. Implement an Agile software development methodology
- B. Implement a process of AI model validation as part of the software review process
- C. Establish a risk governance committee that includes members of the legal team, members of the risk management team, and a privacy officer
- D. Prevent the disclosure of the use of AI-based algorithms for automated decision making

Answer: BC

Explanation:

B ensures reliability and safety principle and C ensures privacy and security principle of AI.

Reference:

<https://docs.microsoft.com/en-us/azure/cloud-adoption-framework/innovate/best-practices/trusted-ai>
<https://docs.microsoft.com/en-us/learn/modules/responsible-ai-principles/3-implications-responsible-ai-practical>

Question: 23

HOTSPOT -

To complete the sentence, select the appropriate option in the answer area.

Hot Area:

Answer Area

According to Microsoft's

	▼
accountability	
fairness	
inclusiveness	
transparency	

principle of responsible AI,

AI systems should **NOT** reflect biases from the data sets that are used to train the systems.

Answer:

Answer Area

According to Microsoft's

accountability
fairness
inclusiveness
transparency

principle of responsible AI,

AI systems should **NOT** reflect biases from the data sets that are used to train the systems.

Explanation:

Reference:

<https://docs.microsoft.com/en-us/azure/cloud-adoption-framework/innovate/best-practices/trusted-ai>

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Question: 24

HOTSPOT -

Select the answer that correctly completes the sentence.

Hot Area:

Answer Area

According to Microsoft's

accountability
fairness
inclusiveness
transparency

principle of responsible AI,

AI systems should **NOT** reflect biases from the data sets that are used to train the systems.

Answer:

Answer Area

According to Microsoft's

accountability
fairness
inclusiveness
transparency

principle of responsible AI,

AI systems should **NOT** reflect biases from the data sets that are used to train the systems.

Explanation:

Fairness is a core ethical principle that all humans aim to understand and apply. This principle is even more important when AI systems are being developed. Key checks and balances need to make sure that the system's decisions don't discriminate or run a gender, race, sexual orientation, or religion bias toward a group

or individual.

Reference:

<https://docs.microsoft.com/en-us/azure/cloud-adoption-framework/innovate/best-practices/trusted-ai>

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Question: 25

DRAG DROP -

Match the types of AI workloads to the appropriate scenarios.

To answer, drag the appropriate workload type from the column on the left to its scenario on the right. Each workload type may be used once, more than once, or not at all.

NOTE: Each correct selection is worth one point.

Select and Place:

Workload Types	Answer Area
Anomaly detection	Workload type
Computer vision	Workload type
Knowledge mining	Workload type
Natural language processing	Determining whether a review is positive or negative

Answer:

Workload Types	Answer Area
Anomaly detection	Knowledge mining
Computer vision	Computer vision
Knowledge mining	Natural language processing
Natural language processing	An automated chatbot to answer questions about refunds and exchanges

Explanation:

Box 1: Knowledge mining -

You can use Azure Cognitive Search's knowledge mining results and populate your knowledge base of your chatbot.

Box 2: Computer vision -

Box 3: Natural language processing

Natural language processing (NLP) is used for tasks such as sentiment analysis.

Reference:

<https://docs.microsoft.com/en-us/azure/architecture/data-guide/technology-choices/natural-language-processing>

Question: 26

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DRAG DROP -

Match the machine learning tasks to the appropriate scenarios.

To answer, drag the appropriate task from the column on the left to its scenario on the right. Each task may be used once, more than once, or not at all.

NOTE: Each correct selection is worth one point.

Select and Place:

Learning Types

Feature engineering

Feature selection

Model deployment

Model evaluation

Model training

Answer Area

Task

Examining the values of a confusion matrix

Task

Splitting a date into month, day, and year fields

Task

Picking temperature and pressure to train a weather model

Answer:**Learning Types**

Feature engineering

Feature selection

Model deployment

Model evaluation

Model training

Answer Area

Model evaluation

Examining the values of a confusion matrix

Feature engineering

Splitting a date into month, day, and year fields

Feature selection

Picking temperature and pressure to train a weather model

Explanation:

Box 1: Model evaluation -

The Model evaluation module outputs a confusion matrix showing the number of true positives, false negatives, false positives, and true negatives, as well as ROC, Precision/Recall, and Lift curves.

Box 2: Feature engineering -

Feature engineering is the process of using domain knowledge of the data to create features that help ML algorithms learn better. In Azure Machine Learning, scaling and normalization techniques are applied to facilitate feature engineering. Collectively, these techniques and feature engineering are referred to as featurization.

Note: Often, features are created from raw data through a process of feature engineering. For example, a time stamp in itself might not be useful for modeling until the information is transformed into units of days, months, or categories that are relevant to the problem, such as holiday versus working day.

Box 3: Feature selection -

In machine learning and statistics, feature selection is the process of selecting a subset of relevant, useful features to use in building an analytical model. Feature selection helps narrow the field of data to the most valuable inputs. Narrowing the field of data helps reduce noise and improve training performance.

Reference:

<https://docs.microsoft.com/en-us/azure/machine-learning/studio/evaluate-model-performance> <https://docs.microsoft.com/en-us/azure/machine-learning/concept-automated-ml>

Question: 27

CertyIQ

HOTSPOT -

To complete the sentence, select the appropriate option in the answer area.

Hot Area:

Answer Area

Data values that influence the prediction of a model are called

dependant variables.
features.
identifiers.
labels.

Answer:

Answer Area

Data values that influence the prediction of a model are called

dependant variables.
features.
identifiers.
labels.

Explanation:

Reference:

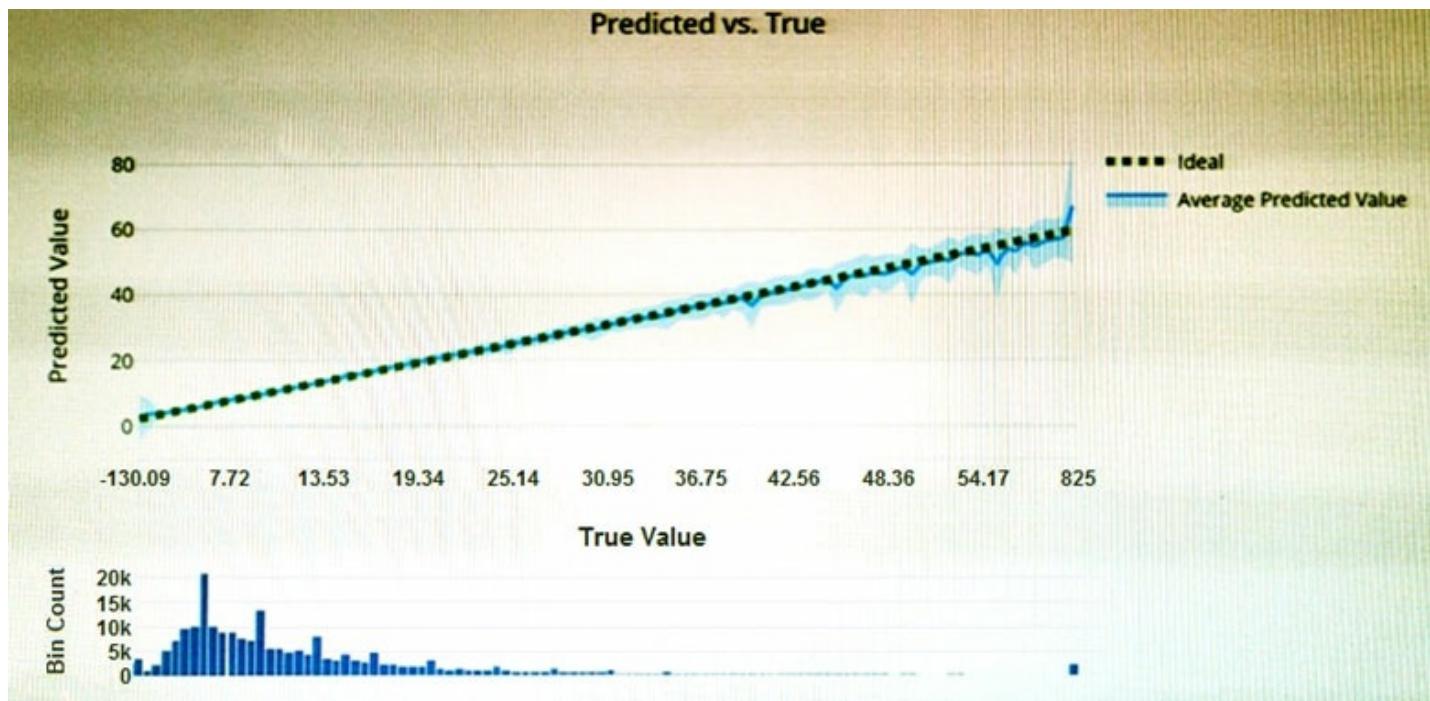
<https://www.baeldung.com/cs/feature-vs-label>

<https://machinelearningmastery.com/discover-feature-engineering-how-to-engineer-features-and-how-to-get-good-at-it/>

Question: 28

CertyIQ

You have the Predicted vs. True chart shown in the following exhibit.



Which type of model is the chart used to evaluate?

- A. classification
- B. regression
- C. clustering

Answer: B

Explanation:

What is a Predicted vs. True chart?

Predicted vs. True shows the relationship between a predicted value and its correlating true value for a regression problem. This graph can be used to measure performance of a model as the closer to the $y=x$ line the predicted values are, the better the accuracy of a predictive model.

Reference:

<https://docs.microsoft.com/en-us/azure/machine-learning/how-to-understand-automated-m>

Question: 29

CertyIQ

Which type of machine learning should you use to predict the number of gift cards that will be sold next month?

- A. classification
- B. regression
- C. clustering

Answer: B

Explanation:

In the most basic sense, regression refers to prediction of a numeric target.

Linear regression attempts to establish a linear relationship between one or more independent variables and a numeric outcome, or dependent variable.

You use this module to define a linear regression method, and then train a model using a labeled dataset. The trained model can then be used to make predictions.

Reference:

Question: 30

You have a dataset that contains information about taxi journeys that occurred during a given period. You need to train a model to predict the fare of a taxi journey. What should you use as a feature?

- A. the number of taxi journeys in the dataset
- B. the trip distance of individual taxi journeys
- C. the fare of individual taxi journeys
- D. the trip ID of individual taxi journeys

Answer: B

Explanation:

The label is the column you want to predict. The identified Features are the inputs you give the model to predict the Label.

Example:

The provided data set contains the following columns:

vendor_id: The ID of the taxi vendor is a feature.

rate_code: The rate type of the taxi trip is a feature.

passenger_count: The number of passengers on the trip is a feature. trip_time_in_secs: The amount of time the trip took. You want to predict the fare of the trip before the trip is completed. At that moment, you don't know how long the trip would take. Thus, the trip time is not a feature and you'll exclude this column from the model. trip_distance: The distance of the trip is a feature. payment_type: The payment method (cash or credit card) is a feature. fare_amount: The total taxi fare paid is the label.

Reference:

<https://docs.microsoft.com/en-us/dotnet/machine-learning/tutorials/predict-prices>

Question: 31

You need to predict the sea level in meters for the next 10 years.

Which type of machine learning should you use?

- A. classification
- B. regression
- C. clustering

Answer: B

Explanation:

In the most basic sense, regression refers to prediction of a numeric target.

Linear regression attempts to establish a linear relationship between one or more independent variables and a numeric outcome, or dependent variable.

You use this module to define a linear regression method, and then train a model using a labeled dataset. The trained model can then be used to make predictions.

Reference:

<https://docs.microsoft.com/en-us/azure/machine-learning/studio-module-reference/linear-regression>

Question: 32

CertyIQ

HOTSPOT -

For each of the following statements, select Yes if the statement is true. Otherwise, select No.

NOTE: Each correct selection is worth one point.

Hot Area:

Answer Area

Statements	Yes	No
Automated machine learning is the process of automating the time-consuming, iterative tasks of machine learning model development.	<input type="radio"/>	<input type="radio"/>
Automated machine learning can automatically infer the training data from the use case provided.	<input type="radio"/>	<input type="radio"/>
Automated machine learning works by running multiple training iterations that are scored and ranked by the metrics you specify.	<input type="radio"/>	<input type="radio"/>
Automated machine learning enables you to specify a dataset and will automatically understand which label to predict.	<input type="radio"/>	<input type="radio"/>

Answer:**Answer Area**

Statements	Yes	No
Automated machine learning is the process of automating the time-consuming, iterative tasks of machine learning model development.	<input checked="" type="radio"/>	<input type="radio"/>
Automated machine learning can automatically infer the training data from the use case provided.	<input type="radio"/>	<input checked="" type="radio"/>
Automated machine learning works by running multiple training iterations that are scored and ranked by the metrics you specify.	<input checked="" type="radio"/>	<input type="radio"/>
Automated machine learning enables you to specify a dataset and will automatically understand which label to predict.	<input type="radio"/>	<input checked="" type="radio"/>

Explanation:

Box 1: Yes -

Automated machine learning, also referred to as automated ML or AutoML, is the process of automating the time consuming, iterative tasks of machine learning model development. It allows data scientists, analysts, and developers to build ML models with high scale, efficiency, and productivity all while sustaining model quality.

Box 2: No -

Box 3: Yes -

During training, Azure Machine Learning creates a number of pipelines in parallel that try different algorithms

and parameters for you. The service iterates through ML algorithms paired with feature selections, where each iteration produces a model with a training score. The higher the score, the better the model is considered to "fit" your data. It will stop once it hits the exit criteria defined in the experiment.

Box 4: No -

Apply automated ML when you want Azure Machine Learning to train and tune a model for you using the target metric you specify.

The label is the column you want to predict.

Reference:

<https://azure.microsoft.com/en-us/services/machine-learning/automatedml/#features>

Question: 33

CertyIQ

HOTSPOT -

To complete the sentence, select the appropriate option in the answer area.

Hot Area:

Answer Area

A banking system that predicts whether a loan will be repaid is an example of the type of machine learning.

classification
regression
clustering

Answer:

Answer Area

A banking system that predicts whether a loan will be repaid is an example of the type of machine learning.

classification
regression
clustering

Explanation:

Two-class classification provides the answer to simple two-choice questions such as Yes/No or True/False.

classification as the prediction whether the loan will be repaid or not -- whether means class - categorical answer as yes or no - hence classification

Question: 34

CertyIQ

HOTSPOT -

For each of the following statements, select Yes if the statement is true. Otherwise, select No.

NOTE: Each correct selection is worth one point.

Hot Area:

Answer Area

Statements	Yes	No
Labelling is the process of tagging training data with known values.	<input type="radio"/>	<input type="radio"/>
You should evaluate a model by using the same data used to train the model.	<input type="radio"/>	<input type="radio"/>
Accuracy is always the primary metric used to measure a model's performance.	<input type="radio"/>	<input type="radio"/>

Answer:**Answer Area**

Statements	Yes	No
Labelling is the process of tagging training data with known values.	<input checked="" type="radio"/>	<input type="radio"/>
You should evaluate a model by using the same data used to train the model.	<input type="radio"/>	<input checked="" type="radio"/>
Accuracy is always the primary metric used to measure a model's performance.	<input type="radio"/>	<input checked="" type="radio"/>

Explanation:

Box 1: Yes -

In machine learning, if you have labeled data, that means your data is marked up, or annotated, to show the target, which is the answer you want your machine learning model to predict.

In general, data labeling can refer to tasks that include data tagging, annotation, classification, moderation, transcription, or processing.

Box 2: No -

Box 3: No -

Accuracy is simply the proportion of correctly classified instances. It is usually the first metric you look at when evaluating a classifier. However, when the test data is unbalanced (where most of the instances belong to one of the classes), or you are more interested in the performance on either one of the classes, accuracy doesn't really capture the effectiveness of a classifier.

Reference:<https://www.cloudfactory.com/data-labeling-guide><https://docs.microsoft.com/en-us/azure/machine-learning/studio/evaluate-model-performance>

Question: 35

CertyIQ

Which service should you use to extract text, key/value pairs, and table data automatically from scanned documents?

- A. Form Recognizer
- B. Text Analytics
- C. Language Understanding
- D. Custom Vision

Answer: A**Explanation:**

Accelerate your business processes by automating information extraction. Form Recognizer applies advanced machine learning to accurately extract text, key/ value pairs, and tables from documents. With just a few samples, Form Recognizer tailors its understanding to your documents, both on-premises and in the cloud. Turn forms into usable data at a fraction of the time and cost, so you can focus more time acting on the information rather than compiling it.

Reference:

<https://azure.microsoft.com/en-us/services/cognitive-services/form-recognizer/>

Question: 36

CertyIQ

HOTSPOT -

To complete the sentence, select the appropriate option in the answer area.

Hot Area:

Answer Area

The ability to extract subtotals and totals from a receipt is a capability of the

Custom Vision
Form Recognizer
Ink Recognizer
Text Analytics

service.

Answer:**Answer Area**

The ability to extract subtotals and totals from a receipt is a capability of the

Custom Vision
Form Recognizer
Ink Recognizer
Text Analytics

service.

Explanation:

Accelerate your business processes by automating information extraction. Form Recognizer applies advanced

machine learning to accurately extract text, key/ value pairs, and tables from documents. With just a few samples, Form Recognizer tailors its understanding to your documents, both on-premises and in the cloud. Turn forms into usable data at a fraction of the time and cost, so you can focus more time acting on the information rather than compiling it.

Reference:

<https://azure.microsoft.com/en-us/services/cognitive-services/form-recognizer/>

CertyIQ

Question: 37

You use Azure Machine Learning designer to publish an inference pipeline.

Which two parameters should you use to access the web service? Each correct answer presents part of the solution.

NOTE: Each correct selection is worth one point.

- A. the model name
- B. the training endpoint
- C. the authentication key
- D. the REST endpoint

Answer: CD

Explanation:

You can consume a published pipeline in the Published pipelines page. Select a published pipeline and find the REST endpoint of it.

To consume the pipeline, you need:

- ⇒ The REST endpoint for your service
- ⇒ The Primary Key for your service

Reference:

<https://docs.microsoft.com/en-in/learn/modules/create-regression-model-azure-machine-learning-designer/deploy-service>

CertyIQ

Question: 38

HOTSPOT -

To complete the sentence, select the appropriate option in the answer area.

Hot Area:

Answer Area

From Azure Machine Learning designer, to deploy a real-time inference pipeline as a service for others to consume, you must deploy the model to

a local web service.
Azure Container Instances.
Azure Kubernetes Service (AKS).
Azure Machine Learning compute.

Answer:

Answer Area

From Azure Machine Learning designer, to deploy a real-time inference pipeline as a service for others to consume, you must deploy the model to

- a local web service.
- Azure Container Instances.
- Azure Kubernetes Service (AKS).**
- Azure Machine Learning compute.

Explanation:

For Prod - AKS and for Dev/Test - use Azure Container Service

To perform real-time inferencing, you must deploy a pipeline as a real-time endpoint.

Real-time endpoints must be deployed to an Azure Kubernetes Service cluster.

Reference:

<https://docs.microsoft.com/en-us/azure/machine-learning/concept-designer#deploy>

Question: 39

CertyIQ

HOTSPOT -

To complete the sentence, select the appropriate option in the answer area.

Hot Area:

Answer Area

Predicting how many hours of overtime a delivery person will work based on the number of order received is an example of

- classification.
- clustering.
- regression.**

Answer:

Answer Area

Predicting how many hours of overtime a delivery person will work based on the number of orders received is an example of

classification.
clustering.
regression.

Explanation:

In the most basic sense, regression refers to prediction of a numeric target.

Linear regression attempts to establish a linear relationship between one or more independent variables and a numeric outcome, or dependent variable.

You use this module to define a linear regression method, and then train a model using a labeled dataset. The trained model can then be used to make predictions.

Incorrect Answers:

- ⇒ Classification is a machine learning method that uses data to determine the category, type, or class of an item or row of data.
- ⇒ Clustering, in machine learning, is a method of grouping data points into similar clusters. It is also called segmentation.

Over the years, many clustering algorithms have been developed. Almost all clustering algorithms use the features of individual items to find similar items. For example, you might apply clustering to find similar people by demographics. You might use clustering with text analysis to group sentences with similar topics or sentiment.

Reference:

<https://docs.microsoft.com/en-us/azure/machine-learning/algorithm-module-reference/linear-regression> <https://docs.microsoft.com/en-us/azure/machine-learning/studio-module-reference/machine-learning-initialize-model-clustering>

Question: 40

CertyIQ

HOTSPOT -

For each of the following statements, select Yes if the statement is true. Otherwise, select No.

NOTE: Each correct selection is worth one point.

Hot Area:

Answer Area

Statements	Yes	No
Azure Machine Learning designer provides a drag-and-drop visual canvas to build, test, and deploy machine learning models.	<input type="radio"/>	<input type="radio"/>
Azure Machine Learning designer enables you to save your progress as a pipeline draft.	<input type="radio"/>	<input type="radio"/>
Azure Machine Learning designer enables you to include custom JavaScript functions.	<input type="radio"/>	<input type="radio"/>

Answer:

Answer Area

Statements	Yes	No
Azure Machine Learning designer provides a drag-and-drop visual canvas to build, test, and deploy machine learning models.	<input checked="" type="radio"/>	<input type="radio"/>
Azure Machine Learning designer enables you to save your progress as a pipeline draft.	<input checked="" type="radio"/>	<input type="radio"/>
Azure Machine Learning designer enables you to include custom JavaScript functions.	<input type="radio"/>	<input checked="" type="radio"/>

Explanation:

Box 1: Yes -

Azure Machine Learning designer lets you visually connect datasets and modules on an interactive canvas to create machine learning models.

Box 2: Yes -

With the designer you can connect the modules to create a pipeline draft.

As you edit a pipeline in the designer, your progress is saved as a pipeline draft.

Box 3: No -

Reference:

<https://docs.microsoft.com/en-us/azure/machine-learning/concept-designer>

Question: 41

HOTSPOT -

You have the following dataset.

CertyIQ

Household Income	Postal Code	House Price Category
20,000	55555	Low
23,000	20541	Middle
80,000	87960	High

You plan to use the dataset to train a model that will predict the house price categories of houses. What are Household Income and House Price Category? To answer, select the appropriate option in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

Answer Area

Household Income:

A feature
 A label

House Price Category:

A feature
 A label

Answer:

Answer Area

Household Income:

A feature
 A label

House Price Category:

A feature
 A label

Explanation:

Feature = Input. Label = Output.

Reference:

<https://docs.microsoft.com/en-us/azure/machine-learning/studio/interpret-model-results>

HOTSPOT -

To complete the sentence, select the appropriate option in the answer area.

Hot Area:

Answer Area

Azure Machine Learning designer lets you create machine learning models by

- adding and connecting modules on a visual canvas.
- automatically performing common data preparation tasks.
- automatically selecting an algorithm to build the most accurate model.
- using a code-first notebook experience.

Answer:

Answer Area

Azure Machine Learning designer lets you create machine learning models by

- adding and connecting modules on a visual canvas.
- automatically performing common data preparation tasks.
- automatically selecting an algorithm to build the most accurate model.
- using a code-first notebook experience.

Explanation:

Reference:

<https://docs.microsoft.com/en-us/azure/machine-learning/concept-designer>

Question: 43

CertyIQ

HOTSPOT -

For each of the following statements, select Yes if the statement is true. Otherwise, select No.

NOTE: Each correct selection is worth one point.

Hot Area:

Answer Area

Statements	Yes	No
Automated machine learning provides you with the ability to include custom Python scripts in a training pipeline.	<input type="radio"/>	<input type="radio"/>
Automated machine learning implements machine learning solutions without the need for programming experience.	<input type="radio"/>	<input type="radio"/>
Automated machine learning provides you with the ability to visually connect datasets and modules on an interactive canvas.	<input type="radio"/>	<input type="radio"/>

Answer:

Answer Area

Statements	Yes	No
Automated machine learning provides you with the ability to include custom Python scripts in a training pipeline.	<input type="radio"/>	<input checked="" type="radio"/>
Automated machine learning implements machine learning solutions without the need for programming experience.	<input checked="" type="radio"/>	<input type="radio"/>
Automated machine learning provides you with the ability to visually connect datasets and modules on an interactive canvas.	<input type="radio"/>	<input checked="" type="radio"/>

Explanation:

No - Automated machine learning only requires you to choose between Python SDK and studio web experience.

Yes - Automated machine learning is a no code solution.

No - This is done in the Azure Machine Learning studio web experience.

Source: <https://docs.microsoft.com/en-us/azure/machine-learning/concept-automated-ml>

Reference:

<https://docs.microsoft.com/en-us/azure/machine-learning/how-to-designer-python>
<https://docs.microsoft.com/en-us/azure/machine-learning/concept-automated-ml>

Question: 44

CertyIQ

A medical research project uses a large anonymized dataset of brain scan images that are categorized into predefined brain haemorrhage types.

You need to use machine learning to support early detection of the different brain haemorrhage types in the images before the images are reviewed by a person.
This is an example of which type of machine learning?

- A. clustering
- B. regression
- C. classification

Answer: C

Explanation:

This is classification. There are multiple reasons it's classification

- The training data is already tagged as with the correct type of hemorrhage
- Classification can be done for more than two classes (which people seem to not realize based on the comments)
- You do clustering on a group of inputs. For example, the scans of 10 people. You can't cluster a single input. Clearly you get a new scan of a new patient and you want to know what that scan shows, you don't have a group of scans to cluster.
- Clustering gives NO labels. You just get groups and don't know what the label is, but in this question it's very clear they want to know the label that belongs to the new scan -> classification

Reference:

<https://docs.microsoft.com/en-us/learn/modules/create-classification-model-azure-machine-learning-designer/introduction>

Question: 45

CertyIQ

When training a model, why should you randomly split the rows into separate subsets?

- A. to train the model twice to attain better accuracy
- B. to train multiple models simultaneously to attain better performance
- C. to test the model by using data that was not used to train the model

Answer: C

Explanation:

First for training then evaluation.

He is referring to the famous `train_test_split` that everyone uses to split the dataset into train and test sets.

You lose statistical power by estimating on a subset n like 50 percent of original N. That's the price you pay for splitting data. For example a normally independently distributed (n.i.d) x has an estimator of arithmetic mean X whose variance inversely related to N. Bigger sample is better for accuracy of a simple arithmetic mean.

Question: 46

CertyIQ

You are evaluating whether to use a basic workspace or an enterprise workspace in Azure Machine Learning.

What are two tasks that require an enterprise workspace? Each correct answer presents a complete solution.
NOTE: Each correct selection is worth one point.

- A. Use a graphical user interface (GUI) to run automated machine learning experiments.
- B. Create a compute instance to use as a workstation.
- C. Use a graphical user interface (GUI) to define and run machine learning experiments from Azure Machine Learning designer.
- D. Create a dataset from a comma-separated value (CSV) file.

Answer: AC

Explanation:

Note: Enterprise workspaces are no longer available as of September 2020. The basic workspace now has all the functionality of the enterprise workspace.

Reference:

<https://www.azure.cn/en-us/pricing/details/machine-learning/>

<https://docs.microsoft.com/en-us/azure/machine-learning/concept-workspace>

Question: 47

CertyIQ

You need to predict the income range of a given customer by using the following dataset.

First Name	Last Name	Age	Education Level	Income Range
Orlando	Gee	45	University	25,000-50,000
Keith	Harris	36	High school	25,000-50,000
Donna	Carreras	52	University	50,000-75,000
Janet	Gates	21	University	75,000-100,000
Lucy	Harrington	68	High school	50,000-75,000

Which two fields should you use as features? Each correct answer presents a complete solution.

NOTE: Each correct selection is worth one point.

- A. Education Level
- B. Last Name
- C. Age
- D. Income Range
- E. First Name

Answer: AC

Explanation:

First Name, Last Name, Age and Education Level are features. Income range is a label (what you want to predict). First Name and Last Name are irrelevant in that they have no bearing on income. Age and Education level are the features you should use.

Question: 48

CertyIQ

You are building a tool that will process images from retail stores and identify the products of competitors. The solution will use a custom model.

Which Azure Cognitive Services service should you use?

- A. Custom Vision
- B. Form Recognizer
- C. Face
- D. Computer Vision

Answer: A

Explanation:

Azure Custom Vision is an image recognition service that lets you build, deploy, and improve your own image identifier models. An image identifier applies labels (which represent classifications or objects) to images, according to their detected visual characteristics. Unlike the Computer Vision service, Custom Vision allows you to specify your own labels and train custom models to detect them.

Reference:

<https://docs.microsoft.com/en-us/azure/cognitive-services/custom-vision-service/overview>

Question: 49

CertyIQ

HOTSPOT -

For each of the following statements, select Yes if the statement is true. Otherwise, select No.

NOTE: Each correct selection is worth one point.

Hot Area:

Answer Area

Statements	Yes	No
Organizing documents into groups based on similarities of the text contained in the documents is an example of clustering.	<input type="radio"/>	<input type="radio"/>
Grouping similar patients based on symptoms and diagnostic test results is an example of clustering.	<input type="radio"/>	<input type="radio"/>
Predicting whether a person will develop mild, moderate, or severe allergy symptoms based on pollen count is an example of clustering.	<input type="radio"/>	<input type="radio"/>

Answer:

Answer Area

Statements	Yes	No
Organizing documents into groups based on similarities of the text contained in the documents is an example of clustering.	<input checked="" type="radio"/>	<input type="radio"/>
Grouping similar patients based on symptoms and diagnostic test results is an example of clustering.	<input checked="" type="radio"/>	<input type="radio"/>
Predicting whether a person will develop mild, moderate, or severe allergy symptoms based on pollen count is an example of clustering.	<input type="radio"/>	<input checked="" type="radio"/>

Explanation:

Clustering is a machine learning task that is used to group instances of data into clusters that contain similar characteristics. Clustering can also be used to identify relationships in a dataset

Regression is a machine learning task that is used to predict the value of the label from a set of related features.

Reference:

<https://docs.microsoft.com/en-us/dotnet/machine-learning/resources/tasks>

Question: 50

CertyIQ

HOTSPOT -

For each of the following statements, select Yes if the statement is true. Otherwise, select No.

NOTE: Each correct selection is worth one point.

Hot Area:

Answer Area

Statements	Yes	No
A validation set includes the set of input examples that will be used to train a mode.	<input type="radio"/>	<input checked="" type="radio"/>
A validation set can be used to determine how well a model predicts labels.	<input type="radio"/>	<input checked="" type="radio"/>
A validation set can be used to verify that all the training data was used to train the model.	<input checked="" type="radio"/>	<input type="radio"/>

Answer:

Answer Area

Statements	Yes	No
A validation set includes the set of input examples that will be used to train a mode.	<input type="radio"/>	<input checked="" type="radio"/>
A validation set can be used to determine how well a model predicts labels.	<input checked="" type="radio"/>	<input type="radio"/>
A validation set can be used to verify that all the training data was used to train the model.	<input type="radio"/>	<input checked="" type="radio"/>

Explanation:

Box 1: No -

The validation dataset is different from the test dataset that is held back from the training of the model.

Box 2: Yes -

A validation dataset is a sample of data that is used to give an estimate of model skill while tuning model's hyperparameters.

Box 3: No -

The Test Dataset, not the validation set, used for this. The Test Dataset is a sample of data used to provide an unbiased evaluation of a final model fit on the training dataset.

Reference:

<https://machinelearningmastery.com/difference-test-validation-datasets/>

Question: 51

CertyIQ

What are two metrics that you can use to evaluate a regression model? Each correct answer presents a complete solution.

NOTE: Each correct selection is worth one point.

- A. coefficient of determination (R2)
- B. F1 score
- C. root mean squared error (RMSE)
- D. area under curve (AUC)
- E. balanced accuracy

Answer: AC

Explanation:

Small Tip: If its Regression model then remembers 'R' and the corresponding answer will be R2 and RMSE.

A: R-squared (R2), or Coefficient of determination represents the predictive power of the model as a value between -inf and 1.00. 1.00 means there is a perfect fit, and the fit can be arbitrarily poor so the scores can be negative.

C: RMS-loss or Root Mean Squared Error (RMSE) (also called Root Mean Square Deviation, RMSD), measures the difference between values predicted by a model and the values observed from the environment that is

being modeled.

Incorrect Answers:

B: F1 score also known as balanced F-score or F-measure is used to evaluate a classification model.

D: aucROC or area under the curve (AUC) is used to evaluate a classification model.

Reference:

<https://docs.microsoft.com/en-us/dotnet/machine-learning/resources/metrics>

Question: 52

CertyIQ

HOTSPOT -

To complete the sentence, select the appropriate option in the answer area.

Hot Area:

Answer Area

Predicting how many vehicles will travel across a bridge on a given day is
an example of

classification.
clustering.
regression.

Answer:

Answer Area

Predicting how many vehicles will travel across a bridge on a given day is
an example of

classification.
clustering.
regression.

Explanation:

Regression is a machine learning task that is used to predict the value of the label from a set of related features.

Reference:

<https://docs.microsoft.com/en-us/dotnet/machine-learning/resources/tasks>

Question: 53

CertyIQ

DRAG DROP -

You need to use Azure Machine Learning designer to build a model that will predict automobile prices. Which type of modules should you use to complete the model? To answer, drag the appropriate modules to the correct locations. Each module may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

NOTE: Each correct selection is worth one point.

Select and Place:

Modules

[Convert to CSV](#)

K-Means Clustering

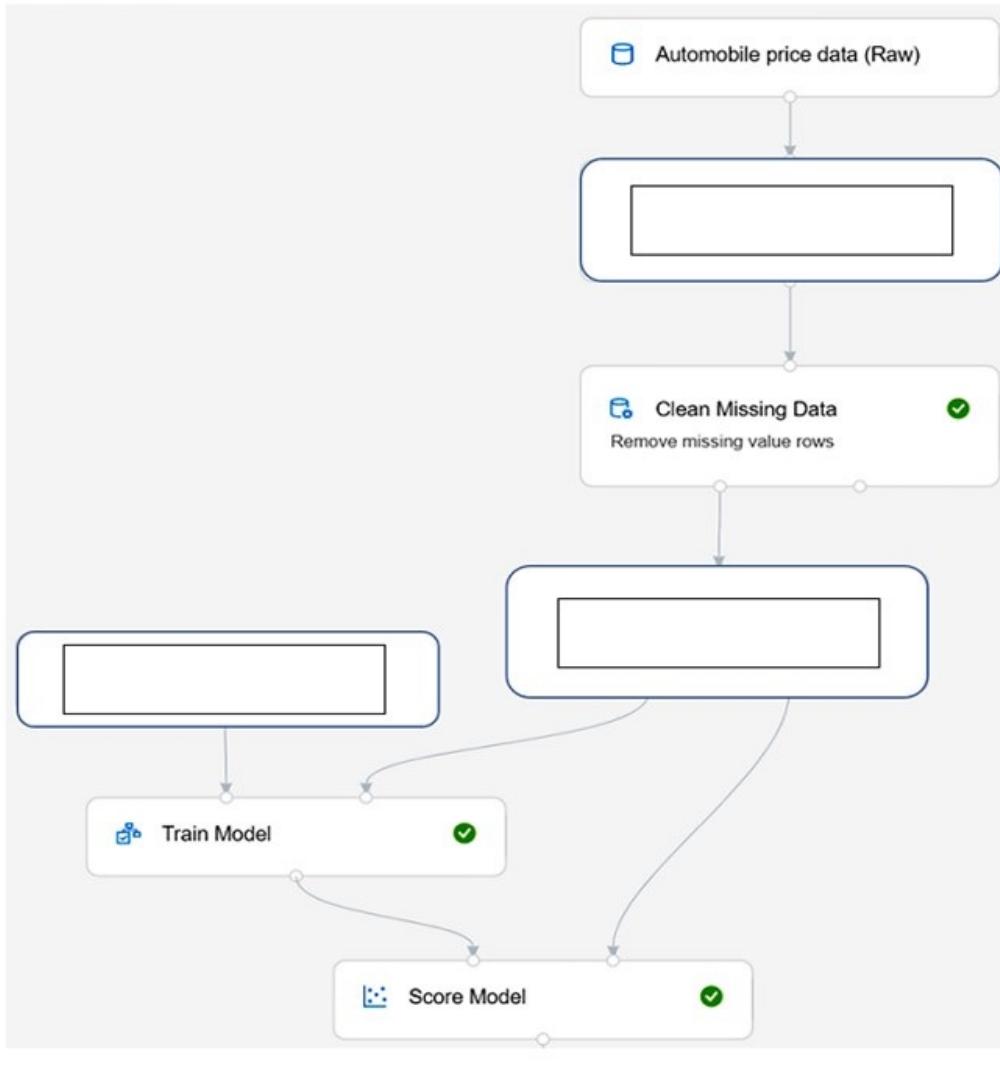
Linear Regression

Split Data

Select Columns in Dataset

Summarize Data

Answer Area



Answer:

Modules

Convert to CSV

K-Means Clustering

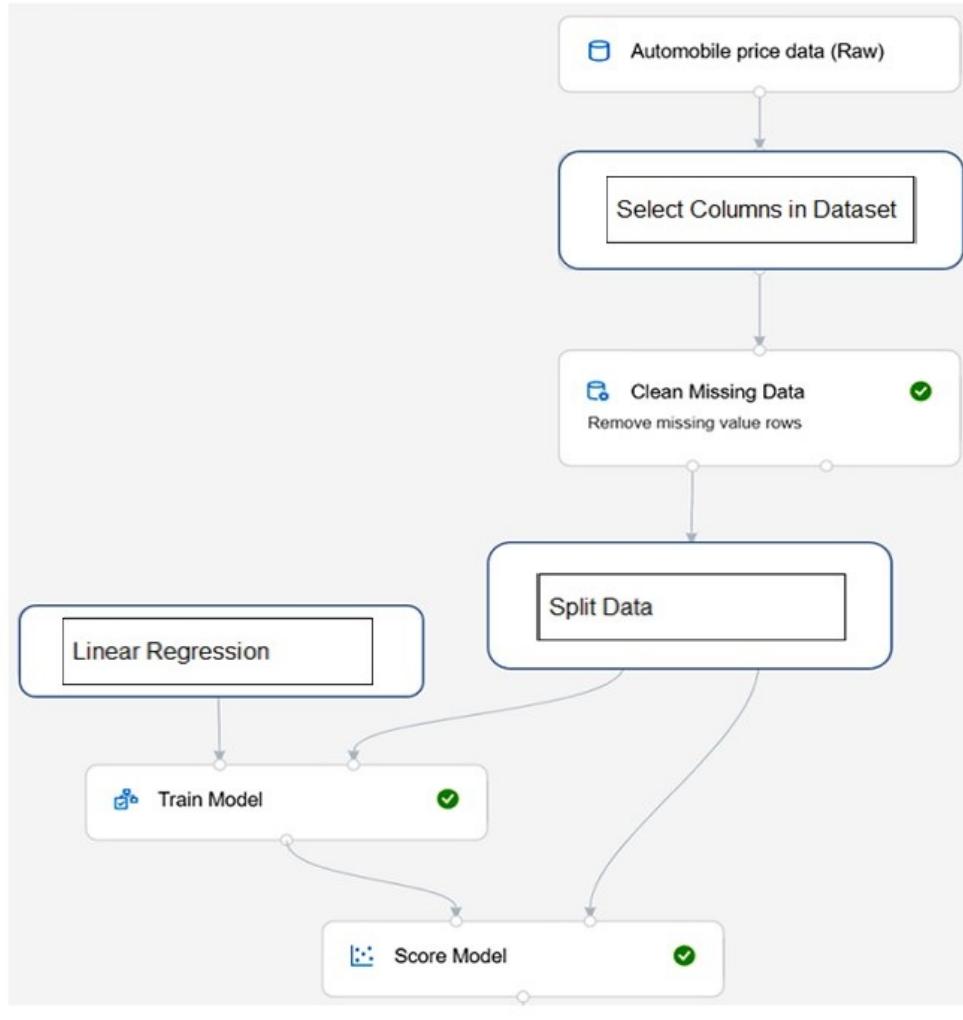
Linear Regression

Split Data

Select Columns in Dataset

Summarize Data

Answer Area



Explanation:

Box 1: Select Columns in Dataset

For Columns to be cleaned, choose the columns that contain the missing values you want to change. You can choose multiple columns, but you must use the same replacement method in all selected columns.

Example:

Automobile price data (Raw)



Select Columns in Dataset

Exclude normalized losses



Clean Missing Data

Remove missing value rows



Box 2: Split data -

Splitting data is a common task in machine learning. You will split your data into two separate datasets. One dataset will train the model and the other will test how well the model performed.

Box 3: Linear regression -

Because you want to predict price, which is a number, you can use a regression algorithm. For this example, you use a linear regression model.

Reference:

<https://docs.microsoft.com/en-us/azure/machine-learning/tutorial-designer-automobile-price-train-score>

Question: 54

CertyIQ

Which type of machine learning should you use to identify groups of people who have similar purchasing habits?

- A. classification
- B. regression
- C. clustering

Answer: C

Explanation:

Clustering is a machine learning task that is used to group instances of data into clusters that contain similar characteristics. Clustering can also be used to identify relationships in a dataset

Reference:

<https://docs.microsoft.com/en-us/dotnet/machine-learning/resources/tasks>

Question: 55

CertyIQ

HOTSPOT -

To complete the sentence, select the appropriate option in the answer area.

Hot Area:

Answer Area

Classification
Clustering
Regression

models can be used to predict the sale price of auctioned items.

Answer:

Answer Area

Classification
Clustering
Regression

models can be used to predict the sale price of auctioned items.

Explanation:

Regression is a machine learning task that is used to predict the value of the label from a set of related features.

Reference:

<https://docs.microsoft.com/en-us/dotnet/machine-learning/resources/tasks>

Question: 56

CertyIQ

Which metric can you use to evaluate a classification model?

- A. true positive rate
- B. mean absolute error (MAE)
- C. coefficient of determination (R²)
- D. root mean squared error (RMSE)

Answer: A

Explanation:

What does a good model look like?

An ROC curve that approaches the top left corner with 100% true positive rate and 0% false positive rate will

be the best model. A random model would display as a flat line from the bottom left to the top right corner. Worse than random would dip below the $y=x$ line.

MAE, RMSE and R2 are metrics for regression:

<https://docs.microsoft.com/en-us/azure/machine-learning/algorithm-module-reference/evaluate-model>

Reference:

<https://docs.microsoft.com/en-us/azure/machine-learning/how-to-understand-automated-ml#classification>

Question: 57

CertyIQ

Which two components can you drag onto a canvas in Azure Machine Learning designer? Each correct answer presents a complete solution.

NOTE: Each correct selection is worth one point.

- A. dataset
- B. compute
- C. pipeline
- D. module

Answer: AD

Explanation:

You can drag-and-drop datasets and modules onto the canvas.

Azure Machine Learning designer lets you visually connect datasets and modules on an interactive canvas to create machine learning models.

Reference:

<https://docs.microsoft.com/en-us/azure/machine-learning/concept-designer>

Question: 58

CertyIQ

You need to create a training dataset and validation dataset from an existing dataset.
Which module in the Azure Machine Learning designer should you use?

- A. Select Columns in Dataset
- B. Add Rows
- C. Split Data
- D. Join Data

Answer: C

Explanation:

A common way of evaluating a model is to divide the data into a training and test set by using Split Data, and then validate the model on the training data.

Use the Split Data module to divide a dataset into two distinct sets.

The studio currently supports training/validation data splits

Reference:

<https://docs.microsoft.com/en-us/azure/machine-learning/how-to-configure-cross-validation-data-splits>

Question: 59

CertyIQ

DRAG DROP -

Match the types of machine learning to the appropriate scenarios.

To answer, drag the appropriate machine learning type from the column on the left to its scenario on the right.

Each machine learning type may be used once, more than once, or not at all.

NOTE: Each correct selection is worth one point.

Select and Place:

Learning Types	Answer Area	
Classification	Learning Type	Predict how many minutes late a flight will arrive based on the amount of snowfall at an airpot.
Clustering	Learning Type	Segment customers into different groups to support a marketing department.
Regression	Learning Type	Predict whether a student will complete a university course.

Answer:

Learning Types	Answer Area	
Classification	Regression	Predict how many minutes late a flight will arrive based on the amount of snowfall at an airpot.
Clustering	Clustering	Segment customers into different groups to support a marketing department.
Regression	Classification	Predict whether a student will complete a university course.

Explanation:

Box 1: Regression -

In the most basic sense, regression refers to prediction of a numeric target.

Linear regression attempts to establish a linear relationship between one or more independent variables and a numeric outcome, or dependent variable.

You use this module to define a linear regression method, and then train a model using a labeled dataset. The trained model can then be used to make predictions.

Box 2: Clustering -

Clustering, in machine learning, is a method of grouping data points into similar clusters. It is also called segmentation.

Over the years, many clustering algorithms have been developed. Almost all clustering algorithms use the features of individual items to find similar items. For example, you might apply clustering to find similar people by demographics. You might use clustering with text analysis to group sentences with similar topics or sentiment.

Box 3: Classification -

Two-class classification provides the answer to simple two-choice questions such as Yes/No or True/False.

Reference:

<https://docs.microsoft.com/en-us/azure/machine-learning/studio-module-reference/linear-regression>

Question: 60

CertyIQ

HOTSPOT -

To complete the sentence, select the appropriate option in the answer area.

Hot Area:

Answer Area

▼	
Accuracy	
Confidence	
Root Mean Square Error	
Sentiment	

is the calculated probability of a correct image classification.

Answer:**Answer Area****Answer Area**

▼	
Accuracy	
Confidence	
Root Mean Square Error	
Sentiment	

is the calculated probability of a correct image classification.

Explanation:

Confidence is the right answer.

..."The probability score of the object classification (which you can interpret as the confidence of the predicted class being correct)"...

Source: <https://docs.microsoft.com/en-us/learn/modules/detect-objects-images-custom-vision/1a-what-is-object-detection>

Reference:

<https://docs.microsoft.com/en-us/azure/cognitive-services/custom-vision-service/getting-started-build-a-classifier>

Question: 61

CertyIQ

HOTSPOT -

To complete the sentence, select the appropriate option in the answer area.

Hot Area:

Answer Area

Ensuring an AI system does not provide a prediction when important fields contain unusual or missing values is ▼ principle for responsible AI.

- an inclusiveness
- a privacy and security
- a reliability and safety
- a transparency

Answer:

Answer Area

Ensuring an AI system does not provide a prediction when important fields contain unusual or missing values is ▼ principle for responsible AI.

- an inclusiveness
- a privacy and security
- a reliability and safety
- a transparency

Explanation:

Reference:

<https://docs.microsoft.com/en-us/azure/cloud-adoption-framework/innovate/best-practices/trusted-ai>

Question: 62

CertyIQ

HOTSPOT -

To complete the sentence, select the appropriate option in the answer area.

Hot Area:

Answer Area

Ensuring that the numeric variables in training data are on a similar scale is an example of

- ▼
- data ingestion.
- feature engineering.
- feature selection.
- model training.

Answer:

Answer Area

Ensuring that the numeric variables in training data are on a similar scale is an example of

- ▼
- data ingestion.
- feature engineering.
- feature selection.
- model training.

Explanation:

Feature engineering is the correct answer.

"In Azure Machine Learning, data-scaling and normalization techniques are applied to make feature engineering easier. Collectively, these techniques and this feature engineering are called featurization in automated ML experiments."

Feature selection is only about selection.

Modifying features = Feature engineering

<https://docs.microsoft.com/en-us/azure/machine-learning/how-to-configure-auto-features>

Reference:

<https://docs.microsoft.com/en-us/azure/architecture/data-science-process/create-features>

Question: 63

CertyIQ

HOTSPOT -

To complete the sentence, select the appropriate option in the answer area.

Hot Area:

Answer Area

Assigning classes to images before training a classification model is an example of

<input type="checkbox"/>	▼
evaluation.	
feature engineering	
hyperparameter tuning.	
labeling.	

Answer:

Answer Area

Assigning classes to images before training a classification model is an example of

<input type="checkbox"/>	▼
evaluation.	
feature engineering	
hyperparameter tuning.	
labeling.	

Explanation:

Reference:

<https://docs.microsoft.com/en-us/azure/machine-learning/how-to-label-data>

Question: 64

CertyIQ

HOTSPOT -

You have an Azure Machine Learning model that predicts product quality. The model has a training dataset that contains 50,000 records. A sample of the data is shown in the following table.

Date	Time	Mass (kg)	Temperature (C)	Quality Test
26/02/2021	15:31:07	2.108	62.5	Pass
26/02/2021	15:31:39	2.099	62.4	Pass
26/02/2021	02:32:21	2.098	66.4	Fail

For each of the following statements, select Yes if the statement is true. Otherwise, select No.

NOTE: Each correct selection is worth one point.

Hot Area:

Answer Area

Statements	Yes	No
Mass (kg) is a feature.	<input type="radio"/>	<input type="radio"/>
Quality Test is a label.	<input type="radio"/>	<input type="radio"/>
Temperature (C) is a label.	<input type="radio"/>	<input type="radio"/>

Answer:

Answer Area

Statements	Yes	No
Mass (kg) is a feature.	<input checked="" type="radio"/>	<input type="radio"/>
Quality Test is a label.	<input checked="" type="radio"/>	<input type="radio"/>
Temperature (C) is a label.	<input type="radio"/>	<input checked="" type="radio"/>

Explanation:

Reference:

<https://docs.microsoft.com/en-us/azure/machine-learning/component-reference/filter-based-feature-selection>

Question: 65

CertyIQ

HOTSPOT -

For each of the following statements, select Yes if the statement is true. Otherwise, select No.

NOTE: Each correct selection is worth one point.

Hot Area:

Answer Area

Statements	Yes	No
You train a regression model by using unlabeled data.	<input type="radio"/>	<input type="radio"/>
The classification technique is used to predict sequential numerical data over time.	<input type="radio"/>	<input type="radio"/>
Grouping items by their common characteristics is an example of clustering.	<input type="radio"/>	<input type="radio"/>

Answer:

Answer Area

Statements	Yes	No
You train a regression model by using unlabeled data.	<input type="radio"/>	<input checked="" type="radio"/>
The classification technique is used to predict sequential numerical data over time.	<input type="radio"/>	<input checked="" type="radio"/>
Grouping items by their common characteristics is an example of clustering.	<input checked="" type="radio"/>	<input type="radio"/>

Explanation:

Reference:

<https://docs.microsoft.com/en-us/learn/modules/create-regression-model-azure-machine-learning-designer/5-create-training-pipeline> <https://docs.microsoft.com/en-us/learn/modules/create-classification-model-azure-machine-learning-designer/introduction> <https://docs.microsoft.com/en-us/learn/modules/create-clustering-model-azure-machine-learning-designer/1-introduction>

Question: 66

CertyIQ

Which two actions are performed during the data ingestion and data preparation stage of an Azure Machine Learning process? Each correct answer presents part of the solution.

NOTE: Each correct selection is worth one point.

- A. Calculate the accuracy of the model.
- B. Score test data by using the model.
- C. Combine multiple datasets.
- D. Use the model for real-time predictions.
- E. Remove records that have missing values.

Answer: CE

Explanation:

Reference:

<https://docs.microsoft.com/en-us/azure/machine-learning/concept-data-ingestion> <https://docs.microsoft.com/en-us/azure/architecture/data-science-process/prepare-data>

Question: 67

CertyIQ

You need to predict the animal population of an area.

Which Azure Machine Learning type should you use?

- A. regression
- B. clustering
- C. classification

Answer: A

Explanation:

Regression is a supervised machine learning technique used to predict numeric values.

Reference:

<https://docs.microsoft.com/en-us/learn/modules/create-regression-model-azure-machine-learning-designer/1-introduction>

Question: 68

CertyIQ

Which two languages can you use to write custom code for Azure Machine Learning designer? Each correct answer presents a complete solution.

NOTE: Each correct selection is worth one point.

- A. Python
- B. R
- C. C#
- D. Scala

Answer: AB

Explanation:

Use Azure Machine Learning designer for customizing using Python and R code.

"Build and train machine learning models with state-of-the art machine learning and deep learning algorithms, including those for computer vision, text analytics, recommendations, and anomaly detection. Drag and drop modules for no-code models or customize using Python and R code." as per the link given:

<https://azure.microsoft.com/en-us/products/machine-learning/designer/#features>

Reference:

<https://azure.microsoft.com/en-us/services/machine-learning/designer/#features>

Question: 69

CertyIQ

HOTSPOT -

For each of the following statements, select Yes if the statement is true. Otherwise, select No.

NOTE: Each correct selection is worth one point.

Hot Area:

Answer Area

Statements	Yes	No
For a regression model, labels must be numeric.	<input type="radio"/>	<input type="radio"/>
For a clustering model, labels must be used.	<input type="radio"/>	<input type="radio"/>
For a classification model, labels must be numeric.	<input type="radio"/>	<input type="radio"/>

Answer:

Answer Area

Statements	Yes	No
For a regression model, labels must be numeric.	<input checked="" type="radio"/>	<input type="radio"/>
For a clustering model, labels must be used.	<input type="radio"/>	<input checked="" type="radio"/>
For a classification model, labels must be numeric.	<input type="radio"/>	<input checked="" type="radio"/>

Explanation:

Box 1: Yes -

For regression problems, the label column must contain numeric data that represents the response variable. Ideally the numeric data represents a continuous scale.

Box 2: No -

K-Means Clustering -

Because the K-means algorithm is an unsupervised learning method, a label column is optional.

If your data includes a label, you can use the label values to guide selection of the clusters and optimize the model.

If your data has no label, the algorithm creates clusters representing possible categories, based solely on the data.

Box 3: No -

For classification problems, the label column must contain either categorical values or discrete values. Some examples might be a yes/no rating, a disease classification code or name, or an income group. If you pick a noncategorical column, the component will return an error during training.

Reference:

<https://docs.microsoft.com/en-us/azure/machine-learning/component-reference/train-model> <https://docs.microsoft.com/en-us/azure/machine-learning/component-reference/k-means-clustering>

Your company wants to build a recycling machine for bottles. The recycling machine must automatically identify bottles of the correct shape and reject all other items.
Which type of AI workload should the company use?

- A. anomaly detection
- B. conversational AI
- C. computer vision
- D. natural language processing

Answer: C

Explanation:

Azure's Computer Vision service gives you access to advanced algorithms that process images and return information based on the visual features you're interested in. For example, Computer Vision can determine whether an image contains adult content, find specific brands or objects, or find human faces.

Reference:

<https://docs.microsoft.com/en-us/azure/cognitive-services/computer-vision/overview>

Question: 71

CertyIQ

HOTSPOT -

For each of the following statements, select Yes if the statement is true. Otherwise, select No.

NOTE: Each correct selection is worth one point.

Hot Area:

Answer Area

Statements	Yes	No
When creating an object detection model in the Custom Vision service, you must choose a classification type of either Multilabel or Multiclass .	<input type="radio"/>	<input type="radio"/>
You can create an object detection model in the Custom Vision service to find the location of content within an image.	<input type="radio"/>	<input type="radio"/>
When creating an object detection model in the Custom Vision service, you can select from a set of predefined domains.	<input type="radio"/>	<input type="radio"/>

Answer:

Answer Area

Statements	Yes	No
When creating an object detection model in the Custom Vision service, you must choose a classification type of either Multilabel or Multiclass .	<input type="radio"/>	<input checked="" type="radio"/>
You can create an object detection model in the Custom Vision service to find the location of content within an image.	<input checked="" type="radio"/>	<input type="radio"/>
When creating an object detection model in the Custom Vision service, you can select from a set of predefined domains.	<input checked="" type="radio"/>	<input type="radio"/>

Explanation:

Reference:

<https://docs.microsoft.com/en-us/azure/cognitive-services/custom-vision-service/get-started-build-detector>

Question: 72

CertyIQ

In which two scenarios can you use the Form Recognizer service? Each correct answer presents a complete solution.

NOTE: Each correct selection is worth one point.

- A. Extract the invoice number from an invoice.
- B. Translate a form from French to English.
- C. Find image of product in a catalog.
- D. Identify the retailer from a receipt.

Answer: AD

Explanation:

Reference:

<https://azure.microsoft.com/en-gb/services/cognitive-services/form-recognizer/#features>

Question: 73

CertyIQ

HOTSPOT -

Select the answer that correctly completes the sentence.

Hot Area:

Answer Area

Counting the number of animals in an area based on a video feed is an example of

- forecasting.
- computer vision.
- conversational AI.
- anomaly detection.

Answer:

Answer Area

Counting the number of animals in an area based on a video feed is an example of

- forecasting.
- computer vision.
- conversational AI.
- anomaly detection.

Explanation:

Reference:

<https://docs.microsoft.com/en-us/azure/cognitive-services/computer-vision/overview> <https://docs.microsoft.com/en-us/azure/cognitive-services/computer-vision/intro-to-spatial-analysis-public-preview>

Question: 74

CertyIQ

HOTSPOT -

You have a database that contains a list of employees and their photos.

You are tagging new photos of the employees.

For each of the following statements select Yes if the statement is true. Otherwise, select No.

NOTE: Each correct selection is worth one point.

Hot Area:

Answer Area

Statements	Yes	No
The Face service can be used to perform facial recognition for employees	<input type="radio"/>	<input type="radio"/>
The Face service will be more accurate if you provide more sample photos of each employee from different angles.	<input type="radio"/>	<input type="radio"/>
If an employee is wearing sunglasses, the Face service will always fail to recognize the employee.	<input type="radio"/>	<input type="radio"/>

Answer:

Answer Area

Statements	Yes	No
The Face service can be used to perform facial recognition for employees	<input checked="" type="radio"/>	<input type="radio"/>
The Face service will be more accurate if you provide more sample photos of each employee from different angles.	<input checked="" type="radio"/>	<input type="radio"/>
If an employee is wearing sunglasses, the Face service will always fail to recognize the employee.	<input type="radio"/>	<input checked="" type="radio"/>

Explanation:

Reference:

<https://docs.microsoft.com/en-us/azure/cognitive-services/face/overview> <https://docs.microsoft.com/en-us/azure/cognitive-services/face/concepts/face-detection>

Question: 75

CertyIQ

You need to develop a mobile app for employees to scan and store their expenses while travelling.
Which type of computer vision should you use?

- A. semantic segmentation
- B. image classification
- C. object detection
- D. optical character recognition (OCR)

Answer: D

Explanation:

Azure's Computer Vision API includes Optical Character Recognition (OCR) capabilities that extract printed or handwritten text from images. You can extract text from images, such as photos of license plates or containers with serial numbers, as well as from documents - invoices, bills, financial reports, articles, and more.

Reference:

<https://docs.microsoft.com/en-us/azure/cognitive-services/computer-vision/concept-recognizing-text>

Question: 76**CertyIQ****HOTSPOT -**

For each of the following statements, select Yes if the statement is true. Otherwise, select No.

NOTE: Each correct selection is worth one point.

Hot Area:

Answer Area

Statements	Yes	No
The Custom Vision service can be used to detect objects in an image.	<input type="radio"/>	<input type="radio"/>
The Custom Vision service requires that you provide your own data to train the model.	<input type="radio"/>	<input type="radio"/>
The Custom Vision service can be used to analyze video files.	<input type="radio"/>	<input type="radio"/>

Answer:**Answer Area**

Statements	Yes	No
The Custom Vision service can be used to detect objects in an image.	<input checked="" type="radio"/>	<input type="radio"/>
The Custom Vision service requires that you provide your own data to train the model.	<input checked="" type="radio"/>	<input type="radio"/>
The Custom Vision service can be used to analyze video files.	<input type="radio"/>	<input checked="" type="radio"/>

Explanation:

Box 1: Yes -

Custom Vision functionality can be divided into two features. Image classification applies one or more labels to an image. Object detection is similar, but it also returns the coordinates in the image where the applied label(s) can be found.

Box 2: Yes -

The Custom Vision service uses a machine learning algorithm to analyze images. You, the developer, submit groups of images that feature and lack the characteristics in question. You label the images yourself at the time of submission. Then, the algorithm trains to this data and calculates its own accuracy by testing itself on those same images.

Box 3: No -

Custom Vision service can be used only on graphic files.

Reference:

<https://docs.microsoft.com/en-us/azure/cognitive-services/Custom-Vision-Service/overview>

CertyIQ**Question: 77**

You are processing photos of runners in a race.

You need to read the numbers on the runners' shirts to identify the runners in the photos.

Which type of computer vision should you use?

- A. facial recognition
- B. optical character recognition (OCR)
- C. image classification
- D. object detection

Answer: B**Explanation:**

Optical character recognition (OCR) allows you to extract printed or handwritten text from images and documents.

Reference:

<https://docs.microsoft.com/en-us/azure/cognitive-services/computer-vision/overview-ocr>

CertyIQ**Question: 78****DRAG DROP -**

Match the types of machine learning to the appropriate scenarios.

To answer, drag the appropriate machine learning type from the column on the left to its scenario on the right. Each machine learning type may be used once, more than once, or not at all.

NOTE: Each correct selection is worth one point.

Select and Place:

Machine Learning Types Facial detection Facial recognition Image classification Object detection Optical character recognition (OCR) Semantic segmentation**Answer Area** Machine Learning Type

Separate images of polar bears and brown bears.

 Machine Learning Type

Determine the location of a bear in a photo.

 Machine Learning Type

Determine which pixels in an image are part of a bear.

Answer:

Machine Learning Types	Answer Area
Facial detection	Image classification
Facial recognition	Object detection
Image classification	Semantic segmentation
Object detection	
Optical character recognition (OCR)	
Semantic segmentation	

Explanation:

Box 1: Image classification -

Image classification is a supervised learning problem: define a set of target classes (objects to identify in images), and train a model to recognize them using labeled example photos.

Box 2: Object detection -

Object detection is a computer vision problem. While closely related to image classification, object detection performs image classification at a more granular scale. Object detection both locates and categorizes entities within images.

Box 3: Semantic Segmentation -

Semantic segmentation achieves fine-grained inference by making dense predictions inferring labels for every pixel, so that each pixel is labeled with the class of its enclosing object or region.

Reference:

<https://developers.google.com/machine-learning/practica/image-classification> <https://docs.microsoft.com/en-us/dotnet/machine-learning/tutorials/object-detection-model-builder> <https://nanonets.com/blog/how-to-do-semantic-segmentation-using-deep-learning/>

Question: 79**CertyIQ**

You use drones to identify where weeds grow between rows of crops to send an instruction for the removal of the weeds.

This is an example of which type of computer vision?

- A. object detection
- B. optical character recognition (OCR)
- C. scene segmentation

Answer: A**Explanation:**

Object detection is similar to tagging, but the API returns the bounding box coordinates for each tag applied. For example, if an image contains a dog, cat and person, the Detect operation will list those objects together with their coordinates in the image.

Incorrect Answers:

B: Optical character recognition (OCR) allows you to extract printed or handwritten text from images and documents.

C: Scene segmentation determines when a scene changes in video based on visual cues. A scene depicts a

single event and it's composed by a series of consecutive shots, which are semantically related.

Reference:

<https://docs.microsoft.com/en-us/ai-builder/object-detection-overview> <https://docs.microsoft.com/en-us/azure/cognitive-services/computer-vision/overview-ocr> <https://docs.microsoft.com/en-us/azure/azure-video-analyzer/video-analyzer-for-media-docs/video-indexer-overview>

Question: 80

CertyIQ

DRAG DROP -

Match the facial recognition tasks to the appropriate questions.

To answer, drag the appropriate task from the column on the left to its question on the right. Each task may be used once, more than once, or not at all.

NOTE: Each correct selection is worth one point.

Select and Place:

Tasks	Answer Area	
grouping	Task	Do two images of a face belong to the same person?
identification	Task	Does this person look like other people?
similarity	Task	Do all the faces belong together?
verification	Task	Who is this person in this group of people?

Answer:

Tasks	Answer Area	
grouping	verification	Do two images of a face belong to the same person?
identification	similarity	Does this person look like other people?
similarity	grouping	Do all the faces belong together?
verification	identification	Who is this person in this group of people?

Explanation:

Box 1: verification -

Face verification: Check the likelihood that two faces belong to the same person and receive a confidence score.

Box 2: similarity -

Box 3: Grouping -

Box 4: identification -

Face detection: Detect one or more human faces along with attributes such as: age, emotion, pose, smile, and facial hair, including 27 landmarks for each face in the image.

~Face verification:

The Verify API does an authentication against two detected faces or from one detected face to one person object. Practically, it evaluates whether two faces belong to the same person.

~Person identification:

The Identify API is used to identify a detected face against a database of people (facial recognition search). This feature might be useful for automatic image tagging in photo management software. You create the database in advance, and you can edit it over time.

Tips to remember: -

verification = same person?

similarity = look like?

grouping = belong together?

identification = who is this person?

Reference:

<https://azure.microsoft.com/en-us/services/cognitive-services/face/#features>

Question: 81

CertyIQ

DRAG DROP -

Match the types of computer vision workloads to the appropriate scenarios.

To answer, drag the appropriate workload type from the column on the left to its scenario on the right. Each workload type may be used once, more than once, or not at all.

NOTE: Each correct selection is worth one point.

Select and Place:

Workloads Types

Facial recognition

Image classification

Object detection

Optical character recognition (OCR)

Answer Area

Workload Type

Identify celebrities in images.

Workload Type

Extract movie title names from movie poster images.

Workload Type

Locate vehicles in images.

Answer:

Workloads Types

Facial recognition

Image classification

Object detection

Optical character recognition (OCR)

Answer Area

Facial recognition

Identify celebrities in images.

Optical character recognition (OCR)

Extract movie title names from movie poster images.

Object detection

Locate vehicles in images.

Explanation:

Box 1: Facial recognition -

Face detection that perceives faces and attributes in an image; person identification that matches an individual in your private repository of up to 1 million people; perceived emotion recognition that detects a range of facial expressions like happiness, contempt, neutrality, and fear; and recognition and grouping of similar faces in images.

Box 2: OCR -

Box 3: Objection detection -

Object detection is similar to tagging, but the API returns the bounding box coordinates (in pixels) for each object found. For example, if an image contains a dog, cat and person, the Detect operation will list those objects together with their coordinates in the image. You can use this functionality to process the relationships between the objects in an image. It also lets you determine whether there are multiple instances of the same tag in an image.

The Detect API applies tags based on the objects or living things identified in the image. There is currently no formal relationship between the tagging taxonomy and the object detection taxonomy. At a conceptual level, the Detect API only finds objects and living things, while the Tag API can also include contextual terms like "indoor", which can't be localized with bounding boxes.

Reference:

<https://azure.microsoft.com/en-us/services/cognitive-services/face/> <https://docs.microsoft.com/en-us/azure/cognitive-services/computer-vision/concept-object-detection>

CertyIQ

Question: 82

You need to determine the location of cars in an image so that you can estimate the distance between the cars. Which type of computer vision should you use?

- A. optical character recognition (OCR)
- B. object detection
- C. image classification
- D. face detection

Answer: B**Explanation:**

Object detection is similar to tagging, but the API returns the bounding box coordinates (in pixels) for each object found. For example, if an image contains a dog, cat and person, the Detect operation will list those objects together with their coordinates in the image. You can use this functionality to process the relationships between the objects in an image. It also lets you determine whether there are multiple instances of the same tag in an image.

The Detect API applies tags based on the objects or living things identified in the image. There is currently no formal relationship between the tagging taxonomy and the object detection taxonomy. At a conceptual level, the Detect API only finds objects and living things, while the Tag API can also include contextual terms like "indoor", which can't be localized with bounding boxes.

Reference:

<https://docs.microsoft.com/en-us/azure/cognitive-services/computer-vision/concept-object-detection>

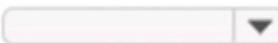
Question: 83

HOTSPOT -

To complete the sentence, select the appropriate option in the answer area.

Hot Area:

Answer Area

You can use the  service to train an object detection model by using your own images.

- Computer Vision
- Custom Vision
- Form Recognizer
- Video Indexer

Answer:**Answer Area**

You can use the  service to train an object detection model by using your own images.

- Computer Vision
- Custom Vision
- Form Recognizer
- Video Indexer

Explanation:

Azure Custom Vision is a cognitive service that lets you build, deploy, and improve your own image classifiers. An image classifier is an AI service that applies labels (which represent classes) to images, according to their visual characteristics. Unlike the Computer Vision service, Custom Vision allows you to specify the labels to apply.

Note: The Custom Vision service uses a machine learning algorithm to apply labels to images. You, the developer, must submit groups of images that feature and lack the characteristics in question. You label the images yourself at the time of submission. Then the algorithm trains to this data and calculates its own accuracy by testing itself on those same images. Once the algorithm is trained, you can test, retrain, and eventually use it to classify new images according to the needs of your app. You can also export the model itself for offline use.

Incorrect Answers:

Computer Vision:

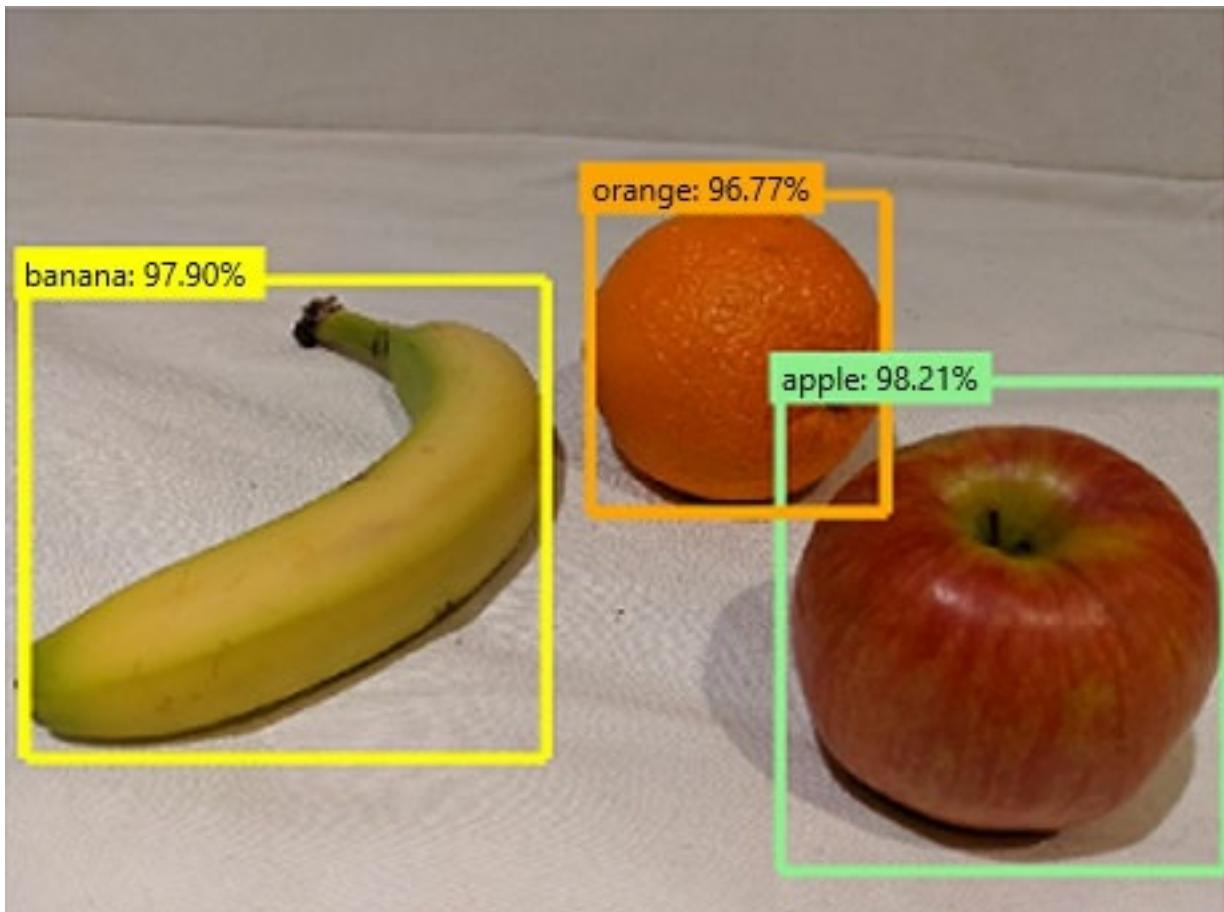
Azure's Computer Vision service provides developers with access to advanced algorithms that process images and return information based on the visual features you're interested in. For example, Computer Vision can determine whether an image contains adult content, find specific brands or objects, or find human faces.

Reference:

<https://docs.microsoft.com/en-us/azure/cognitive-services/custom-vision-service/home>

Question: 84

You send an image to a Computer Vision API and receive back the annotated image shown in the exhibit.



Which type of computer vision was used?

- A. object detection
- B. face detection
- C. optical character recognition (OCR)
- D. image classification

Answer: A

Explanation:

Object detection is similar to tagging, but the API returns the bounding box coordinates (in pixels) for each object found. For example, if an image contains a dog, cat and person, the Detect operation will list those objects together with their coordinates in the image. You can use this functionality to process the relationships between the objects in an image. It also lets you determine whether there are multiple instances of the same tag in an image.

The Detect API applies tags based on the objects or living things identified in the image. There is currently no formal relationship between the tagging taxonomy and the object detection taxonomy. At a conceptual level, the Detect API only finds objects and living things, while the Tag API can also include contextual terms like "indoor", which can't be localized with bounding boxes.

Reference:

<https://docs.microsoft.com/en-us/azure/cognitive-services/computer-vision/concept-object-detection>

Question: 85

CertyIQ

What are two tasks that can be performed by using the Computer Vision service? Each correct answer presents a complete solution.

NOTE: Each correct selection is worth one point.

- A. Train a custom image classification model.

- B. Detect faces in an image.
- C. Recognize handwritten text.
- D. Translate the text in an image between languages.

Answer: BC

Explanation:

B: Azure's Computer Vision service provides developers with access to advanced algorithms that process images and return information based on the visual features you're interested in. For example, Computer Vision can determine whether an image contains adult content, find specific brands or objects, or find human faces.
C: Computer Vision includes Optical Character Recognition (OCR) capabilities. You can use the new Read API to extract printed and handwritten text from images and documents.

Reference:

<https://docs.microsoft.com/en-us/azure/cognitive-services/computer-vision/home>

Question: 86

CertyIQ

What is a use case for classification?

- A. predicting how many cups of coffee a person will drink based on how many hours the person slept the previous night.
- B. analyzing the contents of images and grouping images that have similar colors
- C. predicting whether someone uses a bicycle to travel to work based on the distance from home to work
- D. predicting how many minutes it will take someone to run a race based on past race times

Answer: C

Explanation:

Two-class classification provides the answer to simple two-choice questions such as Yes/No or True/False.

Incorrect Answers:

- A: This is Regression.
- B: This is Clustering.
- D: This is Regression.

Reference:

<https://docs.microsoft.com/en-us/azure/machine-learning/algorithm-module-reference/linear-regression> <https://docs.microsoft.com/en-us/azure/machine-learning/studio-module-reference/machine-learning-initialize-model-clustering>

Question: 87

CertyIQ

What are two tasks that can be performed by using computer vision? Each correct answer presents a complete solution.

NOTE: Each correct selection is worth one point.

- A. Predict stock prices.
- B. Detect brands in an image.
- C. Detect the color scheme in an image
- D. Translate text between languages.
- E. Extract key phrases.

Answer: BC**Explanation:**

B: Identify commercial brands in images or videos from a database of thousands of global logos. You can use this feature, for example, to discover which brands are most popular on social media or most prevalent in media product placement.

C: Analyze color usage within an image. Computer Vision can determine whether an image is black & white or color and, for color images, identify the dominant and accent colors.

Reference:

<https://docs.microsoft.com/en-us/azure/cognitive-services/computer-vision/overview>

CertyIQ**Question: 88**

You need to build an image tagging solution for social media that tags images of your friends automatically. Which Azure Cognitive Services service should you use?

- A. Face
- B. Form Recognizer
- C. Text Analytics
- D. Computer Vision

Answer: A**Explanation:**

More aligned towards face

Reference:

<https://docs.microsoft.com/en-us/azure/cognitive-services/face/overview> <https://docs.microsoft.com/en-us/azure/cognitive-services/face/face-api-how-to-topics/howtodetectfacesinimage>

CertyIQ**Question: 89**

In which two scenarios can you use the Form Recognizer service? Each correct answer presents a complete solution.

NOTE: Each correct selection is worth one point.

- A. Identify the retailer from a receipt
- B. Translate from French to English
- C. Extract the invoice number from an invoice
- D. Find images of products in a catalog

Answer: AC**Explanation:**

Reference:

<https://docs.microsoft.com/en-us/azure/applied-ai-services/form-recognizer/overview?tabs=v2-1>

DRAG DROP -

Match the facial recognition tasks to the appropriate questions.

To answer, drag the appropriate task from the column on the left to its question on the right. Each task may be used once, more than once, or not at all.

NOTE: Each correct selection is worth one point.

Select and Place:

Tasks	Answer Area
grouping	Task Do two images of a face belong to the same person?
identification	Task Does this person look like other people?
similarity	Task Who is this person in this group of people?
verification	

Answer:

Tasks	Answer Area
grouping	verification Do two images of a face belong to the same person?
identification	similarity Does this person look like other people?
similarity	identification Who is this person in this group of people?
verification	

Explanation:

Box 1: verification -

Identity verification -

Modern enterprises and apps can use the Face identification and Face verification operations to verify that a user is who they claim to be.

Box 2: similarity -

The Find Similar operation does face matching between a target face and a set of candidate faces, finding a smaller set of faces that look similar to the target face.

This is useful for doing a face search by image.

The service supports two working modes, matchPerson and matchFace. The matchPerson mode returns similar faces after filtering for the same person by using the Verify API. The matchFace mode ignores the same-person filter. It returns a list of similar candidate faces that may or may not belong to the same person.

Box 3: identification -

Face identification can address "one-to-many" matching of one face in an image to a set of faces in a secure repository. Match candidates are returned based on how closely their face data matches the query face. This scenario is used in granting building or airport access to a certain group of people or verifying the user of a device.

Reference:

Question: 91

Which Computer Vision feature can you use to generate automatic captions for digital photographs?

- A. Recognize text.
- B. Identify the areas of interest.
- C. Detect objects.
- D. Describe the images.

Answer: D

Explanation:

Describe images with human-readable language

Computer Vision can analyze an image and generate a human-readable phrase that describes its contents.

The algorithm returns several descriptions based on different visual features, and each description is given a confidence score. The final output is a list of descriptions ordered from highest to lowest confidence.

The image description feature is part of the Analyze Image API.

Reference:

<https://docs.microsoft.com/en-us/azure/cognitive-services/computer-vision/concept-describing-images>

Question: 92

Which service should you use to extract text, key/value pairs, and table data automatically from scanned documents?

- A. Custom Vision
- B. Face
- C. Form Recognizer
- D. Language

Answer: C

Explanation:

Form Recognizer applies advanced machine learning to accurately extract text, key-value pairs, tables, and structures from documents.

Reference:

<https://azure.microsoft.com/en-us/services/form-recognizer/>

Question: 93

HOTSPOT -

Select the answer that correctly completes the sentence.

Hot Area:

Answer Area

Object detection
Facial recognition
Image classification
Optical character recognition (OCR)

extracts text from handwritten documents.

Answer:

Answer Area

Object detection
Facial recognition
Image classification
Optical character recognition (OCR)

extracts text from handwritten documents.

Explanation:

Handwriting OCR (optical character recognition) is the process of automatically extracting handwritten information from paper, scans and other low-quality digital documents.

Reference:

<https://vidado.ai/handwriting-ocr>

CertyIQ

Question: 94

You are developing a solution that uses the Text Analytics service.

You need to identify the main talking points in a collection of documents.

Which type of natural language processing should you use?

- A. entity recognition
- B. key phrase extraction
- C. sentiment analysis
- D. language detection

Answer: B

Explanation:

Broad entity extraction: Identify important concepts in text, including key

Key phrase extraction/ Broad entity extraction: Identify important concepts in text, including key phrases and named entities such as people, places, and organizations.

Reference:

<https://docs.microsoft.com/en-us/azure/architecture/data-guide/technology-choices/natural-language-processing>

Question: 95

CertyIQ

In which two scenarios can you use speech recognition? Each correct answer presents a complete solution.
NOTE: Each correct selection is worth one point.

- A. an in-car system that reads text messages aloud
- B. providing closed captions for recorded or live videos
- C. creating an automated public address system for a train station
- D. creating a transcript of a telephone call or meeting

Answer: BD

Explanation:

B, D is correct as LUIS interpret meaning of text whereas text analytics is for sentiment or key Phrase extraction.

Reference:

<https://azure.microsoft.com/en-gb/services/cognitive-services/speech-to-text/#features>

Question: 96

CertyIQ

HOTSPOT -

To complete the sentence, select the appropriate option in the answer area.

Hot Area:

Answer Area

While presenting at a conference, your session is transcribed into subtitles for the audience. This is an example of

sentiment analysis.
speech recognition.
speech synthesis.
translation.

Answer:

Answer Area

While presenting at a conference, your session is transcribed into subtitles for the audience. This is an example of

A dropdown menu containing four items:

- sentiment analysis.
- speech recognition.
- speech synthesis.
- translation.

The second item, "speech recognition.", is highlighted with a green background.

Explanation:

Reference:

<https://azure.microsoft.com/en-gb/services/cognitive-services/speech-to-text/#features>

Question: 97

CertyIQ

You need to build an app that will read recipe instructions aloud to support users who have reduced vision. Which version service should you use?

- A. Text Analytics
- B. Translator
- C. Speech
- D. Language Understanding (LUIS)

Answer: C

Explanation:

Speech is actually Text-to-Speech

Speech Recognition is actually Speech-to-Text.

Reference:

<https://azure.microsoft.com/en-us/services/cognitive-services/text-to-speech/#features>

Question: 98

CertyIQ

HOTSPOT -

For each of the following statements, select Yes if the statement is true. Otherwise, select No.

NOTE: Each correct selection is worth one point.

Hot Area:

Answer Area

Statements	Yes	No
You can use the Speech service to transcribe a call to text.	<input type="radio"/>	<input type="radio"/>
You can use the Text Analytics service to extract key entities from a call transcript.	<input type="radio"/>	<input type="radio"/>
You can use the Speech service to translate the audio of a call to a different language.	<input type="radio"/>	<input type="radio"/>

Answer:

Answer Area

Statements	Yes	No
You can use the Speech service to transcribe a call to text.	<input checked="" type="radio"/>	<input type="radio"/>
You can use the Text Analytics service to extract key entities from a call transcript.	<input checked="" type="radio"/>	<input type="radio"/>
You can use the Speech service to translate the audio of a call to a different language.	<input checked="" type="radio"/>	<input type="radio"/>

Explanation:

Transcribe a call to text -Speech Service: Speech to Text Service

Extract call Transcription to find key entity - Text Analytic : Entity Recognition

Translate a call to different language : Speech Service : Speech Translations

Thus Y/ Y /Y

Reference:

<https://docs.microsoft.com/en-gb/azure/cognitive-services/text-analytics/overview>
<https://azure.microsoft.com/en-gb/services/cognitive-services/speech-services/>

Your website has a chatbot to assist customers.

You need to detect when a customer is upset based on what the customer types in the chatbot.

Which type of AI workload should you use?

- A. anomaly detection
- B. computer vision
- C. regression
- D. natural language processing

Answer: D

Explanation:

Natural language processing (NLP) is used for tasks such as sentiment analysis, topic detection, language detection, key phrase extraction, and document categorization.

Sentiment Analysis is the process of determining whether a piece of writing is positive, negative or neutral.

Reference:

<https://docs.microsoft.com/en-us/azure/architecture/data-guide/technology-choices/natural-language-processing>

Question: 100

CertyIQ

You plan to develop a bot that will enable users to query a knowledge base by using natural language processing. Which two services should you include in the solution? Each correct answer presents part of the solution.

NOTE: Each correct selection is worth one point.

- A. QnA Maker
- B. Azure Bot Service
- C. Form Recognizer
- D. Anomaly Detector

Answer: AB

Explanation:

Reference:

<https://docs.microsoft.com/en-us/azure/bot-service/bot-service-overview-introduction?view=azure-bot-service-4.0> <https://docs.microsoft.com/en-us/azure/cognitive-services/luis/choose-natural-language-processing-service>

Question: 101

CertyIQ

In which two scenarios can you use a speech synthesis solution? Each correct answer presents a complete solution.

NOTE: Each correct selection is worth one point.

- A. an automated voice that reads back a credit card number entered into a telephone by using a numeric keypad
- B. generating live captions for a news broadcast
- C. extracting key phrases from the audio recording of a meeting
- D. an AI character in a computer game that speaks audibly to a player

Answer: AD

Explanation:

Azure Text to Speech is a Speech service feature that converts text to lifelike speech.

Incorrect Answers:

C: Extracting key phrases is not speech synthesis.

Reference:

<https://azure.microsoft.com/en-in/services/cognitive-services/text-to-speech/>

CertyIQ

Question: 102

HOTSPOT -

For each of the following statements, select Yes if the statement is true. Otherwise, select No.

NOTE: Each correct selection is worth one point.

Hot Area:

Answer Area

Statements	Yes	No
You can use the Translator service to translate text between languages.	<input type="radio"/>	<input type="radio"/>
You can use the Translator service to detect the language of a given text.	<input type="radio"/>	<input type="radio"/>
You can use the Translator service to transcribe audible speech into text.	<input type="radio"/>	<input type="radio"/>

Answer:

Answer Area

Statements	Yes	No
You can use the Translator service to translate text between languages.	<input checked="" type="radio"/>	<input type="radio"/>
You can use the Translator service to detect the language of a given text.	<input checked="" type="radio"/>	<input type="radio"/>
You can use the Translator service to transcribe audible speech into text.	<input type="radio"/>	<input checked="" type="radio"/>

Explanation:

The translator service provides multi-language support for text translation, transliteration, language detection, and dictionaries.

Speech-to-Text, also known as automatic speech recognition (ASR), is a feature of Speech Services that provides transcription.

Reference:

<https://docs.microsoft.com/en-us/azure/cognitive-services/Translator/translator-info-overview> <https://docs.microsoft.com/en-us/legal/cognitive-services/speech-service/speech-to-text/transparency-note>

Question: 103

CertyIQ

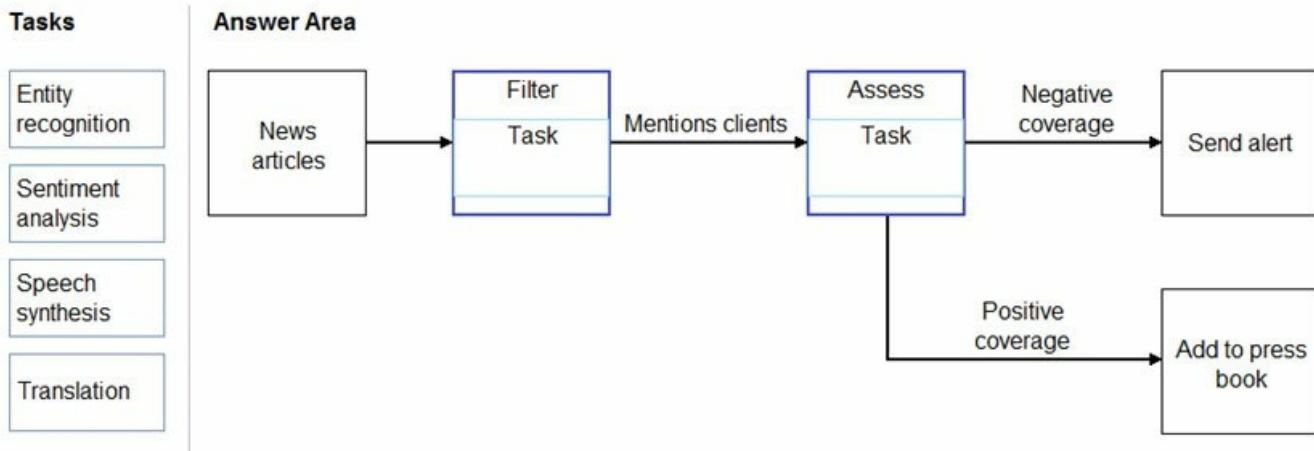
DRAG DROP -

You need to scan the news for articles about your customers and alert employees when there is a negative article. Positive articles must be added to a press book.

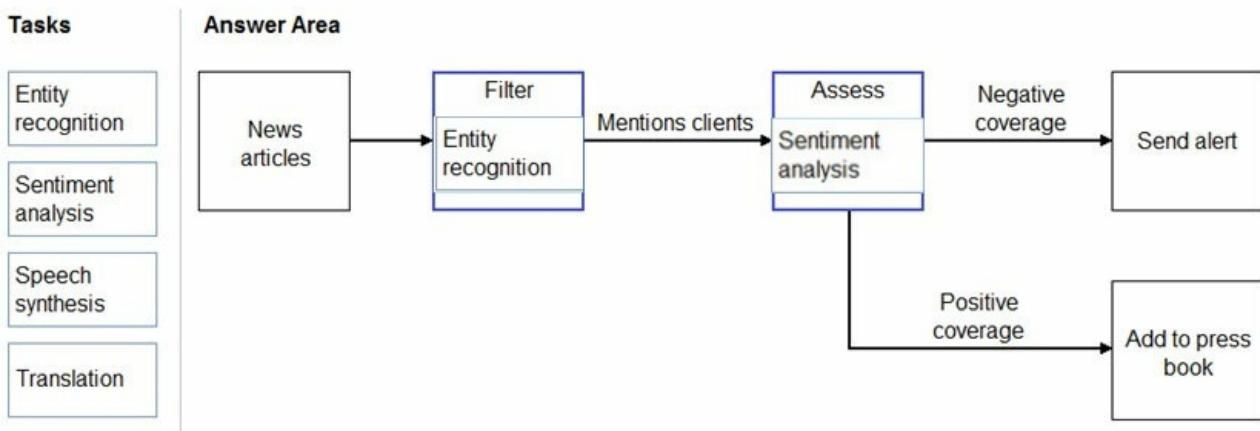
Which natural language processing tasks should you use to complete the process? To answer, drag the appropriate tasks to the correct locations. Each task may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

NOTE: Each correct selection is worth one point.

Select and Place:



Answer:



Explanation:

Box 1: Entity recognition -

the Named Entity Recognition module in Machine Learning Studio (classic), to identify the names of things, such as people, companies, or locations in a column of text.

Named entity recognition is an important area of research in machine learning and natural language processing (NLP), because it can be used to answer many real-world questions, such as:

- ⇒ Which companies were mentioned in a news article?
- ⇒ Does a tweet contain the name of a person? Does the tweet also provide his current location?
- ⇒ Were specified products mentioned in complaints or reviews?

Box 2: Sentiment Analysis -

The Text Analytics API's Sentiment Analysis feature provides two ways for detecting positive and negative sentiment. If you send a Sentiment Analysis request, the API will return sentiment labels (such as "negative", "neutral" and "positive") and confidence scores at the sentence and document-level.

Reference:

<https://docs.microsoft.com/en-us/azure/machine-learning/studio-module-reference/named-entity-recognition>

<https://docs.microsoft.com/en-us/azure/cognitive-services/text-analytics/how-tos/text-analytics-how-to-sentiment-analysis>

Question: 104**CertyIQ**

You are building a knowledge base by using QnA Maker.

Which file format can you use to populate the knowledge base?

- A. PPTX
- B. XML
- C. ZIP
- D. PDF

Answer: D**Explanation:**

D: Content types of documents you can add to a knowledge base:

Content types include many standard structured documents such as PDF, DOC, and TXT.

Note: The tool supports the following file formats for ingestion:

- ⇒ .tsv: QnA contained in the format Question(tab)Answer.
- ⇒ .txt, .docx, .pdf: QnA contained as regular FAQ content--that is, a sequence of questions and answers.

Incorrect Answers:

A: PPTX is the default presentation file format for new PowerPoint presentations.

B: It is not possible to ingest xml file directly.

Reference:

<https://docs.microsoft.com/en-us/azure/cognitive-services/qnamaker/concepts/data-sources-and-content>

Question: 105**CertyIQ**

In which scenario should you use key phrase extraction?

- A. identifying whether reviews of a restaurant are positive or negative
- B. generating captions for a video based on the audio track
- C. identifying which documents provide information about the same topics
- D. translating a set of documents from English to German

Answer: C

Explanation:

C - "Use key phrase extraction to quickly identify the main concepts in text. For example, in the text "The food was delicious and the staff were wonderful.", key phrase extraction will return the main topics: "food" and "wonderful staff"."

Question: 106

CertyIQ

You have insurance claim reports that are stored as text.

You need to extract key terms from the reports to generate summaries.

Which type of AI workload should you use?

- A. natural language processing
- B. conversational AI
- C. anomaly detection
- D. computer vision

Answer: A

Explanation:

NLP can extract key terms from the reports to generate summaries.

Reference:

<https://docs.microsoft.com/en-us/azure/architecture/data-guide/technology-choices/natural-language-processing>

Question: 107

CertyIQ

HOTSPOT -

To complete the sentence, select the appropriate option in the answer area.

Hot Area:

Answer Area

Natural language processing can be used to

classify email messages as work-related or personal.

predict the number of future car rentals.

predict which website visitors will make a transaction.

stop a process in a factory when extremely high temperatures are registered.

Answer:

Answer Area

Natural language processing can be used to

- classify email messages as work-related or personal.
- predict the number of future car rentals.
- predict which website visitors will make a transaction.
- stop a process in a factory when extremely high temperatures are registered.

Explanation:

Natural language processing (NLP) is used for tasks such as sentiment analysis, topic detection, language detection, key phrase extraction, and document categorization.

Reference:

<https://docs.microsoft.com/en-us/azure/architecture/data-guide/technology-choices/natural-language-processing>

Question: 108

CertyIQ

Which AI service can you use to interpret the meaning of a user input such as 'Call me back later'?

- A. Translator
- B. Text Analytics
- C. Speech
- D. Language Understanding (LUIS)

Answer: D

Explanation:

Language Understanding (LUIS) is a cloud-based AI service, that applies custom machine-learning intelligence to a user's conversational, natural language text to predict overall meaning, and pull out relevant, detailed information.

Reference:

<https://docs.microsoft.com/en-us/azure/cognitive-services/luis/what-is-luis>

Question: 109

CertyIQ

You are developing a chatbot solution in Azure.

Which service should you use to determine a user's intent?

- A. Translator
- B. QnA Maker
- C. Speech
- D. Language Understanding (LUIS)

Answer: D**Explanation:**

Language Understanding (LUIS) is a cloud-based API service that applies custom machine-learning intelligence to a user's conversational, natural language text to predict overall meaning, and pull out relevant, detailed information.

Design your LUIS model with categories of user intentions called intents. Each intent needs examples of user utterances. Each utterance can provide data that needs to be extracted with machine-learning entities.

Reference:

<https://docs.microsoft.com/en-us/azure/cognitive-services/luis/what-is-luis>

CertyIQ**Question: 110**

You need to make the written press releases of your company available in a range of languages. Which service should you use?

- A. Translator
- B. Text Analytics
- C. Speech
- D. Language Understanding (LUIS)

Answer: A**Explanation:**

Translator is a cloud-based machine translation service you can use to translate text in near real-time through a simple REST API call. The service uses modern neural machine translation technology and offers statistical machine translation technology. Custom Translator is an extension of Translator, which allows you to build neural translation systems.

Reference:

<https://docs.microsoft.com/en-us/azure/cognitive-services/translator/>

CertyIQ**Question: 111**

HOTSPOT -

For each of the following statements, select Yes if the statement is true. Otherwise, select No.

NOTE: Each correct selection is worth one point.

Hot Area:

Answer Area

Statements	Yes	No
The Text Analytics service can identify in which language text is written.	<input type="radio"/>	<input type="radio"/>
The Text Analytics service can detect handwritten signatures in a document.	<input type="radio"/>	<input type="radio"/>
The Text Analytics service can identify companies and organizations mentioned in a document.	<input type="radio"/>	<input type="radio"/>

Answer:

Answer Area

Statements	Yes	No
The Text Analytics service can identify in which language text is written.	<input checked="" type="radio"/>	<input type="radio"/>
The Text Analytics service can detect handwritten signatures in a document.	<input type="radio"/>	<input checked="" type="radio"/>
The Text Analytics service can identify companies and organizations mentioned in a document.	<input checked="" type="radio"/>	<input type="radio"/>

Explanation:

The Text Analytics API is a cloud-based service that provides advanced natural language processing over raw text, and includes four main functions: sentiment analysis, key phrase extraction, named entity recognition, and language detection.

Box 1: Yes -

You can detect which language the input text is written in and report a single language code for every document submitted on the request in a wide range of languages, variants, dialects, and some regional/cultural languages. The language code is paired with a score indicating the strength of the score.

Box 2: No -

Box 3: Yes -

Named Entity Recognition: Identify and categorize entities in your text as people, places, organizations, date/time, quantities, percentages, currencies, and more.

Well-known entities are also recognized and linked to more information on the web.

Reference:

<https://docs.microsoft.com/en-us/azure/cognitive-services/text-analytics/overview>

Question: 112

CertyIQ

DRAG DROP -

Match the types of natural languages processing workloads to the appropriate scenarios.

To answer, drag the appropriate workload type from the column on the left to its scenario on the right. Each workload type may be used once, more than once, or not at all.

NOTE: Each correct selection is worth one point.

Select and Place:

Workloads Types

Entity recognition
Key phrase extraction
Language modeling
Sentiment analysis
Translation
Speech recognition and speech synthesis

Answer Area

Workload Type	Extracts persons, locations, and organizations from the text
Workload Type	Evaluates text along a positive-negative scale
Workload Type	Converts text to a different language

Answer:

Workloads Types

Entity recognition
Key phrase extraction
Language modeling
Sentiment analysis
Translation
Speech recognition and speech synthesis

Answer Area

Entity recognition	Extracts persons, locations, and organizations from the text
Sentiment analysis	Evaluates text along a positive-negative scale
Translation	Converts text to a different language

Explanation:

Box 1: Entity recognition -

Named Entity Recognition (NER) is the ability to identify different entities in text and categorize them into pre-defined classes or types such as: person, location, event, product, and organization.

Box 2: Sentiment analysis -

Sentiment Analysis is the process of determining whether a piece of writing is positive, negative or neutral.

Box 3: Translation -

Using Microsoft's Translator text API

This versatile API from Microsoft can be used for the following:

Translate text from one language to another.

Transliterate text from one script to another.

Detecting language of the input text.

Find alternate translations to specific text.

Determine the sentence length.

Reference:

<https://docs.microsoft.com/en-in/azure/cognitive-services/text-analytics/how-tos/text-analytics-how-to-entity-linking?tabs=version-3-preview> <https://azure.microsoft.com/en-us/services/cognitive-services/text-analytics/>

Question: 113

HOTSPOT -

For each of the following statements, select Yes if the statement is true. Otherwise, select No.

NOTE: Each correct selection is worth one point.

Hot Area:

Answer Area

Statements	Yes	No
------------	-----	----

Monitoring online service reviews for profanities is an example of natural language processing.

Identifying brand logos in an image is an example of natural languages processing.

Monitoring public news sites for negative mentions of a product is an example of natural language processing.

Answer:

Answer Area

Statements	Yes	No
------------	-----	----

Monitoring online service reviews for profanities is an example of natural language processing.

Identifying brand logos in an image is an example of natural languages processing.

Monitoring public news sites for negative mentions of a product is an example of natural language processing.

Explanation:

Box 1: Yes -

Content Moderator is part of Microsoft Cognitive Services allowing businesses to use machine assisted moderation of text, images, and videos that augment human review. The text moderation capability now includes a new machine-learning based text classification feature which uses a trained model to identify possible abusive, derogatory or discriminatory language such as slang, abbreviated words, offensive, and intentionally misspelled words for review.

Box 2: No -

Azure's Computer Vision service gives you access to advanced algorithms that process images and return information based on the visual features you're interested in. For example, Computer Vision can determine whether an image contains adult content, find specific brands or objects, or find human faces.

Box 3: Yes -

Natural language processing (NLP) is used for tasks such as sentiment analysis, topic detection, language detection, key phrase extraction, and document categorization.

Sentiment Analysis is the process of determining whether a piece of writing is positive, negative or neutral.

Reference:

<https://azure.microsoft.com/es-es/blog/machine-assisted-text-classification-on-content-moderator-public-preview/> <https://docs.microsoft.com/en-us/azure/architecture/data-guide/technology-choices/natural-language-processing>

Question: 114

CertyIQ

You are developing a natural language processing solution in Azure. The solution will analyze customer reviews and determine how positive or negative each review is. This is an example of which type of natural language processing workload?

- A. language detection
- B. sentiment analysis
- C. key phrase extraction
- D. entity recognition

Answer: B

Explanation:

Sentiment Analysis is the process of determining whether a piece of writing is positive, negative or neutral.

Reference:

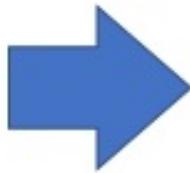
<https://docs.microsoft.com/en-us/azure/architecture/data-guide/technology-choices/natural-language-processing>

Question: 115

CertyIQ

You use natural language processing to process text from a Microsoft news story. You receive the output shown in the following exhibit.

For weeks now, students and teachers have been settling into the uncharted routine of distance learning. Today I want to thank all of the educators who are connecting classrooms and classmates together in the sudden shift to remote learning. This change requires everyone working together and is unlike anything we've seen in the modern history of education. We've seen countries, school districts and universities move rapidly into remote learning environments with Microsoft Teams being used in 175 countries by 183,000 institutions.



now [DateTime]
students [PersonType]
teachers [PersonType]
distance learning [Skill]
Today [DateTime-Date]
educators [PersonType]
classrooms [Location]
classmates [PersonType]
remote learning [Skill]
history [Skill]
education [Skill]
remote learning [Skill]
Microsoft [Organization]
175 [Quantity-Number]
183,000 [Quantity-Number]

Which type of natural languages processing was performed?

- A. entity recognition
- B. key phrase extraction

C. sentiment analysis

D. translation

Answer: A

Explanation:

Named Entity Recognition (NER) is the ability to identify different entities in text and categorize them into pre-defined classes or types such as: person, location, event, product, and organization.

In this question, the square brackets indicate the entities such as DateTime, PersonType, Skill.

Reference:

<https://docs.microsoft.com/en-in/azure/cognitive-services/text-analytics/how-tos/text-analytics-how-to-entity-linking?tabs=version-3-preview>

Question: 116

CertyIQ

DRAG DROP -

You plan to apply Text Analytics API features to a technical support ticketing system.

Match the Text Analytics API features to the appropriate natural language processing scenarios.

To answer, drag the appropriate feature from the column on the left to its scenario on the right. Each feature may be used once, more than once, or not at all.

NOTE: Each correct selection is worth one point.

Select and Place:

API Features

Entity recognition

Key phrase extraction

Language detection

Sentiment analysis

Answer Area

API Feature

Understand how upset a customer is based on the text contained in the support ticket.

API Feature

Summarize important information from the support ticket.

API Feature

Extract key dates from the support ticket.

Answer:

API Features

Entity recognition

Key phrase extraction

Language detection

Sentiment analysis

Answer Area

Sentiment analysis

Understand how upset a customer is based on the text contained in the support ticket.

Key phrase extraction

Summarize important information from the support ticket.

Entity recognition

Extract key dates from the support ticket.

Explanation:

Box1: Sentiment analysis -

Sentiment Analysis is the process of determining whether a piece of writing is positive, negative or neutral.

Box 2: Broad entity extraction -

Broad entity extraction: Identify important concepts in text, including key

Key phrase extraction/ Broad entity extraction: Identify important concepts in text, including key phrases and named entities such as people, places, and organizations.

Box 3: Entity Recognition -

Named Entity Recognition: Identify and categorize entities in your text as people, places, organizations, date/time, quantities, percentages, currencies, and more.

Well-known entities are also recognized and linked to more information on the web.

Reference:

<https://docs.microsoft.com/en-us/azure/architecture/data-guide/technology-choices/natural-language-processing> <https://azure.microsoft.com/en-us/services/cognitive-services/text-analytics>

Question: 117

CertyIQ

You are authoring a Language Understanding (LUIS) application to support a music festival.

You want users to be able to ask questions about scheduled shows, such as: 'Which act is playing on the main stage?

The question 'Which act is playing on the main stage?' is an example of which type of element?

- A. an intent
- B. an utterance
- C. a domain
- D. an entity

Answer: B

Explanation:

Utterances are input from the user that your app needs to interpret.

Reference:

<https://docs.microsoft.com/en-us/azure/cognitive-services/LUIS/luis-concept-utterance>

Question: 118

CertyIQ

You build a QnA Maker bot by using a frequently asked questions (FAQ) page.

You need to add professional greetings and other responses to make the bot more user friendly.

What should you do?

- A. Increase the confidence threshold of responses
- B. Enable active learning
- C. Create multi-turn questions
- D. Add chit-chat

Answer: D

Explanation:

Chitchat is correct. You can choose between different personas.

Reference:

<https://docs.microsoft.com/en-us/azure/cognitive-services/qnamaker/how-to/chit-chat-knowledge-base?tabs=v1>

Question: 119

You need to develop a chatbot for a website. The chatbot must answer users' questions based on the information in the following documents:

- ⇒ A product troubleshooting guide in a Microsoft Word document
- ⇒ A frequently asked questions (FAQ) list on a webpage

Which service should you use to process the documents?

- A. Azure Bot Service
- B. Language Understanding
- C. Text Analytics
- D. QnA Maker

Answer: D**Explanation:**

Reference:

<https://docs.microsoft.com/en-us/azure/cognitive-services/QnAMaker/Overview/overview>

Question: 120

You are building a Language Understanding model for an e-commerce business.

You need to ensure that the model detects when utterances are outside the intended scope of the model.

What should you do?

- A. Test the model by using new utterances
- B. Add utterances to the None intent
- C. Create a prebuilt task entity
- D. Create a new model

Answer: B**Explanation:**

The None intent is filled with utterances that are outside of your domain.

Reference:

<https://docs.microsoft.com/en-us/azure/cognitive-services/LUIS/luis-concept-intent>

Question: 121

Which two scenarios are examples of a natural language processing workload? Each correct answer presents a complete solution.

NOTE: Each correct selection is worth one point.

- A. monitoring the temperature of machinery to turn on a fan when the temperature reaches a specific threshold
- B. a smart device in the home that responds to questions such as, "What will the weather be like today?"
- C. a website that uses a knowledge base to interactively respond to users' questions
- D. assembly line machinery that autonomously inserts headlamps into cars

Answer: BC

Explanation:

Natural language processing (NLP) is used for tasks such as sentiment analysis, topic detection, language detection, key phrase extraction, and document categorization.

Reference:

<https://docs.microsoft.com/en-us/azure/architecture/data-guide/technology-choices/natural-language-processing>

Question: 122

CertyIQ

You have an AI solution that provides users with the ability to control smart devices by using verbal commands. Which two types of natural language processing (NLP) workloads does the solution use? Each correct answer presents part of the solution.

NOTE: Each correct selection is worth one point.

- A. text-to-speech
- B. key phrase extraction
- C. speech-to-text
- D. language modeling
- E. translation

Answer: CD

Explanation:

speech-to-text and language modeling. You need to use language modeling to determine the intent of the utterance and to perform an action based on that intent.

Question: 123

CertyIQ

HOTSPOT -

For each of the following statements, select Yes if the statement is true. Otherwise, select No.

NOTE: Each correct selection is worth one point.

Hot Area:

Answer Area

Statements

The Language service can identify in which language text is written.

Yes	<input type="radio"/>	No	<input type="radio"/>
------------	-----------------------	-----------	-----------------------

The Language service can detect handwritten signatures in a document.

<input type="radio"/>	<input type="radio"/>
-----------------------	-----------------------

The Language service can identify companies and organizations mentioned in a document.

<input type="radio"/>	<input type="radio"/>
-----------------------	-----------------------

Answer:

Answer Area

Statements	Yes	No
The Language service can identify in which language text is written.	<input checked="" type="radio"/>	<input type="radio"/>
The Language service can detect handwritten signatures in a document.	<input type="radio"/>	<input checked="" type="radio"/>
The Language service can identify companies and organizations mentioned in a document.	<input checked="" type="radio"/>	<input type="radio"/>

Explanation:

Box 1: Yes -

Azure Cognitive Service for Language provides features including:

* Language detection: This pre-configured feature evaluates text, and determines the language it was written in. It returns a language identifier and a score that indicates the strength of the analysis.

Box 2: No -

Handwritten detection is part of OCR (Optical Character Recognition).

Box 3: Yes -

Azure Cognitive Service for Language provides features including:

* Named Entity Recognition (NER): This pre-configured feature identifies entities in text across several pre-defined categories.

Note: Named entity recognition is a natural language processing technique that can automatically scan entire articles and pull out some fundamental entities in a text and classify them into predefined categories. Entities may be,

Organizations,

Quantities,

Monetary values,

Percentages, and more.

People's names -

Company names -

Geographic locations (Both physical and political)

Product names -

Dates and times -

Amounts of money -

Names of events -

Reference:

<https://docs.microsoft.com/en-us/azure/cognitive-services/language-service/overview>

Question: 124

CertyIQ

DRAG DROP -

You plan to use Azure Cognitive Services to develop a voice controlled personal assistant app.

Match the Azure Cognitive Services to the appropriate tasks.

To answer, drag the appropriate service from the column on the left to its description on the right. Each service may be used once, more than once, or not at all.

NOTE: Each correct selection is worth one point.

Select and Place:

Services

- Speech
- Language service
- Translator Text

Answer Area

Convert a user's speech to text

Identify a user's intent

Provide a spoken response to the user

Answer:

Services

- Speech
- Language service
- Translator Text

Answer Area

Speech
Language service
Speech

Convert a user's speech to text

Identify a user's intent

Provide a spoken response to the user

Explanation:

Box 1: Speech -

The Speech service provides speech-to-text and text-to-speech capabilities with an Azure Speech resource. You can transcribe speech to text with high accuracy, produce natural-sounding text-to-speech voices, translate spoken audio, and use speaker recognition during conversations.

Box 2: Language service -

Build applications with conversational language understanding, a Cognitive Service for Language feature that understands natural language to interpret user goals and extracts key information from conversational phrases. Create multilingual, customizable intent classification and entity extraction models for your domain-specific keywords or phrases across 96 languages.

Box 3: Speech -

Incorrect:

Not Translator text: Text translation is a cloud-based REST API feature of the Translator service that uses neural machine translation technology to enable quick and accurate source-to-target text translation in real time across all supported languages.

Reference:

<https://docs.microsoft.com/en-us/azure/cognitive-services/speech-service/overview> <https://azure.microsoft.com/en-us/services/cognitive-services/conversational-language-understanding/> <https://docs.microsoft.com/en-us/azure/cognitive-services/translator/text-translation-overview>

Question: 125

CertyIQ

You need to make the written press releases of your company available in a range of languages. Which service should you use?

- A. Speech
- B. Language

- C. Translator
- D. Personalizer

Answer: C**Explanation:**

Translator, an AI service for real-time document and text translation. Translate text instantly or in batches across more than 100 languages, powered by the latest innovations in machine translation. Support a wide range of use cases, such as translation for call centers, multilingual conversational agents, or in-app communication.

Reference:

<https://azure.microsoft.com/en-us/services/cognitive-services/translator/4>

Question: 126**CertyIQ**

You have insurance claim reports that are stored as text. You need to extract key terms from the reports to generate summaries. Which type of AI workload should you use?

- A. anomaly detection
- B. natural language processing
- C. computer vision
- D. knowledge mining

Answer: B**Explanation:**

Key phrase extraction is one of the features offered by Azure Cognitive Service for Language, a collection of machine learning and AI algorithms in the cloud for developing intelligent applications that involve written language. Use key phrase extraction to quickly identify the main concepts in text. For example, in the text "The food was delicious and the staff were wonderful.", key phrase extraction will return the main topics: "food" and "wonderful staff".

Reference:

<https://docs.microsoft.com/en-us/azure/cognitive-services/language-service/key-phrase-extraction/overview>

Question: 127**CertyIQ**

You need to build an app that will read recipe instructions aloud to support users who have reduced vision. Which version service should you use?

- A. Language service
- B. Translator
- C. Speech
- D. Personalizer

Answer: C**Explanation:**

Speech, a managed service offering industry-leading speech capabilities such as speech-to-text, text-to-speech, speech translation, and speaker recognition.

Reference:

<https://azure.microsoft.com/en-us/services/cognitive-services/speech-services/>

Question: 128

CertyIQ

You have a webchat bot that provides responses from a QnA Maker knowledge base. You need to ensure that the bot uses user feedback to improve the relevance of the responses over time. What should you use?

- A. key phrase extraction
- B. sentiment analysis
- C. business logic
- D. active learning

Answer: D

Explanation:

Active learning.

- 1.Bot gets the answer from the knowledge base with the GenerateAnswer API, using the top property to get a number of answers.
- 2.Bot determines explicit feedback: Using your own custom business logic, filter out low scores. In the bot or client-application, display list of possible answers to the user and get user's selected answer.
- 3.Bot sends selected answer back to QnA Maker with the Train API.

Reference:

<https://docs.microsoft.com/en-us/azure/cognitive-services/qnamaker/how-to/improve-knowledge-base>

Question: 129

CertyIQ

You are developing a conversational AI solution that will communicate with users through multiple channels including email, Microsoft Teams, and webchat.

Which service should you use?

- A. Text Analytics
- B. Azure Bot Service
- C. Translator
- D. Form Recognizer

Answer: B

Explanation:

Reference:

<https://docs.microsoft.com/en-us/azure/bot-service/bot-service-overview-introduction?view=azure-bot-service-4.0>

HOTSPOT -

For each of the following statements, select Yes if the statement is true. Otherwise, select No.

NOTE: Each correct selection is worth one point.

Hot Area:

Answer Area

Statements	Yes	No
A bot that responds to queries by internal users is an example of a conversational AI workload.	<input type="radio"/>	<input type="radio"/>
An application that displays images relating to an entered search term is an example of a conversational AI workload.	<input type="radio"/>	<input type="radio"/>
A web form used to submit a request to reset a password is an example of a conversational AI workload.	<input type="radio"/>	<input type="radio"/>

Answer:

Answer Area

Statements	Yes	No
A bot that responds to queries by internal users is an example of a conversational AI workload.	<input checked="" type="radio"/>	<input type="radio"/>
An application that displays images relating to an entered search term is an example of a conversational AI workload.	<input type="radio"/>	<input checked="" type="radio"/>
A web form used to submit a request to reset a password is an example of a conversational AI workload.	<input type="radio"/>	<input checked="" type="radio"/>

Explanation:

Y/N/N

Reference:

<https://docs.microsoft.com/en-us/azure/bot-service/bot-service-overview-introduction?view=azure-bot-service-4.0>

You need to provide content for a business chatbot that will help answer simple user queries.

What are three ways to create question and answer text by using QnA Maker? Each correct answer presents a

complete solution.

NOTE: Each correct selection is worth one point.

- A. Generate the questions and answers from an existing webpage.
- B. Use automated machine learning to train a model based on a file that contains the questions.
- C. Manually enter the questions and answers.
- D. Connect the bot to the Cortana channel and ask questions by using Cortana.
- E. Import chit-chat content from a predefined data source.

Answer: ACE

Explanation:

Automatic extraction -

Extract question-answer pairs from semi-structured content, including FAQ pages, support websites, excel files, SharePoint documents, product manuals and policies.

Reference:

<https://docs.microsoft.com/en-us/azure/cognitive-services/qnamaker/concepts/content-types>

Question: 132

CertyIQ

You have a frequently asked questions (FAQ) PDF file.

You need to create a conversational support system based on the FAQ.

Which service should you use?

- A. QnA Maker
- B. Text Analytics
- C. Computer Vision
- D. Language Understanding (LUIS)

Answer: A

Explanation:

QnA Maker is a cloud-based API service that lets you create a conversational question-and-answer layer over your existing data. Use it to build a knowledge base by extracting questions and answers from your semi-structured content, including FAQs, manuals, and documents.

Reference:

<https://azure.microsoft.com/en-us/services/cognitive-services/qna-maker/>

Question: 133

CertyIQ

You need to reduce the load on telephone operators by implementing a chatbot to answer simple questions with predefined answers.

Which two AI service should you use to achieve the goal? Each correct answer presents part of the solution.

NOTE: Each correct selection is worth one point.

- A. Text Analytics
- B. QnA Maker
- C. Azure Bot Service
- D. Translator

Answer: BC

Explanation:

Bots are a popular way to provide support through multiple communication channels. You can use the QnA Maker service and Azure Bot Service to create a bot that answers user questions.

Reference:

<https://docs.microsoft.com/en-us/learn/modules/build-faq-chatbot-qna-maker-azure-bot-service/>

Question: 134

CertyIQ

Which two scenarios are examples of a conversational AI workload? Each correct answer presents a complete solution.

NOTE: Each correct selection is worth one point.

- A. a smart device in the home that responds to questions such as What will the weather be like today?
- B. a website that uses a knowledge base to interactively respond to users' questions
- C. assembly line machinery that autonomously inserts headlamps into cars
- D. monitoring the temperature of machinery to turn on a fan when the temperature reaches a specific threshold

Answer: AB

Explanation:

A - smart device

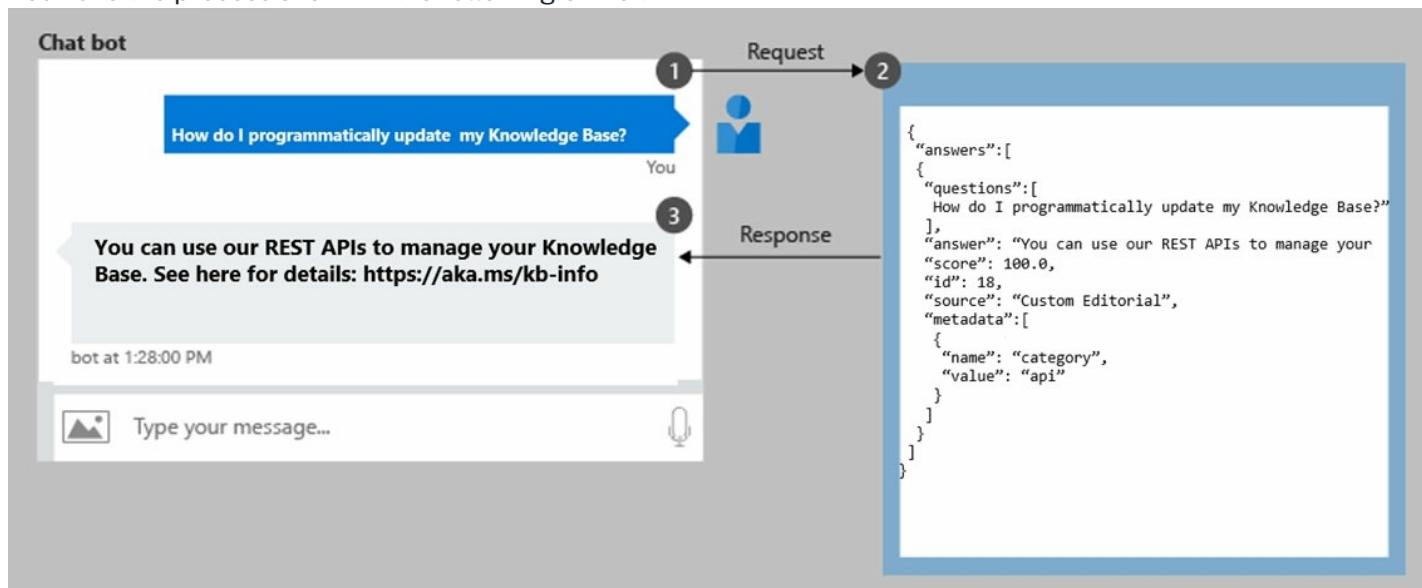
B - website

C&D don't look like as chat-bots.

Question: 135

CertyIQ

You have the process shown in the following exhibit.



Which type of AI solution is shown in the diagram?

- A. a sentiment analysis solution
- B. a chatbot

- C. a machine learning model
- D. a computer vision application

Answer: B

Question: 136

CertyIQ

You need to develop a web-based AI solution for a customer support system. Users must be able to interact with a web app that will guide them to the best resource or answer.
Which service should you use?

- A. Custom Vision
- B. QnA Maker
- C. Translator Text
- D. Face

Answer: B

Explanation:

QnA Maker is a cloud-based API service that lets you create a conversational question-and-answer layer over your existing data. Use it to build a knowledge base by extracting questions and answers from your semi-structured content, including FAQs, manuals, and documents. Answer users' questions with the best answers from the QnAs in your knowledge base automatically. Your knowledge base gets smarter, too, as it continually learns from user behavior.

Incorrect Answers:

A: Azure Custom Vision is a cognitive service that lets you build, deploy, and improve your own image classifiers. An image classifier is an AI service that applies labels (which represent classes) to images, according to their visual characteristics. Unlike the Computer Vision service, Custom Vision allows you to specify the labels to apply.

D: Azure Cognitive Services Face Detection API: At a minimum, each detected face corresponds to a faceRectangle field in the response. This set of pixel coordinates for the left, top, width, and height mark the located face. Using these coordinates, you can get the location of the face and its size. In the API response, faces are listed in size order from largest to smallest.

Reference:

<https://azure.microsoft.com/en-us/services/cognitive-services/qna-maker/>

Question: 137

CertyIQ

Which AI service should you use to create a bot from a frequently asked questions (FAQ) document?

- A. QnA Maker
- B. Language Understanding (LUIS)
- C. Text Analytics
- D. Speech

Answer: A

HOTSPOT -

To complete the sentence, select the appropriate option in the answer area.

Hot Area:

Answer Area

The interactive answering of questions entered by a user as part of an application is an example of

anomaly detection.
computer vision.
conversational AI.
forecasting.

Answer:

Answer Area

The interactive answering of questions entered by a user as part of an application is an example of

anomaly detection.
computer vision.
conversational AI.
forecasting.

Explanation:

With Microsoft's Conversational AI tools developers can build, connect, deploy, and manage intelligent bots that naturally interact with their users on a website, app, Cortana, Microsoft Teams, Skype, Facebook Messenger, Slack, and more.

Reference:

<https://azure.microsoft.com/en-in/blog/microsoft-conversational-ai-tools-enable-developers-to-build-connect-and-manage-intelligent-bots>

Which scenario is an example of a webchat bot?

- A. Determine whether reviews entered on a website for a concert are positive or negative, and then add a thumbs up or thumbs down emoji to the reviews.

- B. Translate into English questions entered by customers at a kiosk so that the appropriate person can call the customers back.
- C. Accept questions through email, and then route the email messages to the correct person based on the content of the message.
- D. From a website interface, answer common questions about scheduled events and ticket purchases for a music festival.

Answer: D

Question: 140

CertyIQ

HOTSPOT -

For each of the following statements, select Yes if the statement is true. Otherwise, select No.

NOTE: Each correct selection is worth one point.

Hot Area:

Answer Area

Statements	Yes	No
You can use QnA Maker to query an Azure SQL database.	<input type="radio"/>	<input type="radio"/>
You should use QnA Maker when you want a knowledge base to provide the same answer to different users who submit similar questions.	<input type="radio"/>	<input type="radio"/>
The QnA Maker service can determine the intent of a user utterance.	<input type="radio"/>	<input type="radio"/>

Answer:

Answer Area

Statements	Yes	No
You can use QnA Maker to query an Azure SQL database.	<input type="radio"/>	<input checked="" type="radio"/>
You should use QnA Maker when you want a knowledge base to provide the same answer to different users who submit similar questions.	<input checked="" type="radio"/>	<input type="radio"/>
The QnA Maker service can determine the intent of a user utterance.	<input type="radio"/>	<input checked="" type="radio"/>

Explanation:

Language Understanding (LUIS) and QnA Maker solve different issues. LUIS determines the intent of a user's text (known as an utterance), while QnA Maker determines the answer to a user's text (known as a query).

Reference:

Question: 141**CertyIQ****HOTSPOT -**

For each of the following statements, select Yes if the statement is true. Otherwise, select No.

NOTE: Each correct selection is worth one point.

Hot Area:

Answer Area

Statements	Yes	No
You can communicate with a bot by using Cortana.	<input type="radio"/>	<input type="radio"/>
You can communicate with a bot by using Microsoft Teams.	<input type="radio"/>	<input type="radio"/>
You can communicate with a bot by using a webchat interface.	<input type="radio"/>	<input type="radio"/>

Answer:**Answer Area**

Statements	Yes	No
You can communicate with a bot by using Cortana.	<input checked="" type="radio"/>	<input type="radio"/>
You can communicate with a bot by using Microsoft Teams.	<input checked="" type="radio"/>	<input type="radio"/>
You can communicate with a bot by using a webchat interface.	<input checked="" type="radio"/>	<input type="radio"/>

Explanation:

You can connect a bot via:

Alexa, Office 365 email, Facebook, Kik, LINE, Teams, Skype for Business, Slack, Telegram, WeChat, Webex

Reference:

The Channels List for Bots: <https://learn.microsoft.com/en-us/azure/bot-service/bot-service-manage-channels?view=azure-bot-service-4.0>

Question: 142

CertyIQ

HOTSPOT -

For each of the following statements, select Yes if the statement is true. Otherwise, select No.

NOTE: Each correct selection is worth one point.

Hot Area:

Answer Area

Statements	Yes	No
A restaurant can use a chatbot to empower customers to make reservations by using a website or an app.	<input type="radio"/>	<input type="radio"/>
A restaurant can use a chatbot to answer inquiries about business hours from a webpage.	<input type="radio"/>	<input type="radio"/>
A restaurant can use a chatbot to automate responses to customer reviews on an external website.	<input type="radio"/>	<input type="radio"/>

Answer:

Answer Area

Statements	Yes	No
A restaurant can use a chatbot to empower customers to make reservations by using a website or an app.	<input checked="" type="radio"/>	<input type="radio"/>
A restaurant can use a chatbot to answer inquiries about business hours from a webpage.	<input checked="" type="radio"/>	<input type="radio"/>
A restaurant can use a chatbot to automate responses to customer reviews on an external website.	<input type="radio"/>	<input checked="" type="radio"/>

Explanation:

Box 1: Yes -

Box 2: Yes -

Box 3: N - It needs to gauge sentiment and respond accordingly.

Reference:

Question: 143

CertyIQ

Which two scenarios are examples of a conversational AI workload? Each correct answer presents a complete solution.

NOTE: Each correct selection is worth one point.

- A. a telephone answering service that has a pre-recorder message
- B. a chatbot that provides users with the ability to find answers on a website by themselves
- C. telephone voice menus to reduce the load on human resources
- D. a service that creates frequently asked questions (FAQ) documents by crawling public websites

Answer: BC**Explanation:**

B: A bot is an automated software program designed to perform a particular task. Think of it as a robot without a body.

C: Automated customer interaction is essential to a business of any size. In fact, 61% of consumers prefer to communicate via speech, and most of them prefer self-service. Because customer satisfaction is a priority for all businesses, self-service is a critical facet of any customer-facing communications strategy.

Incorrect Answers:

D: Early bots were comparatively simple, handling repetitive and voluminous tasks with relatively straightforward algorithmic logic. An example would be web crawlers used by search engines to automatically explore and catalog web content.

Reference:

<https://docs.microsoft.com/en-us/azure/architecture/data-guide/big-data/ai-overview> <https://docs.microsoft.com/en-us/azure/architecture/solution-ideas/articles/interactive-voice-response-bot>

Question: 144

CertyIQ

HOTSPOT -

For each of the following statements, select Yes if the statement is true. Otherwise, select No.

NOTE: Each correct selection is worth one point.

Hot Area:

Answer Area

Statements	Yes	No
Azure Bot Service and Azure Cognitive Services can be integrated.	<input type="radio"/>	<input type="radio"/>
Azure Bot Service engages with customers in a conversational manner.	<input type="radio"/>	<input type="radio"/>
Azure Bot Service can import frequently asked questions (FAQ) to question and answer sets.	<input type="radio"/>	<input type="radio"/>

Answer:

Answer Area

Statements	Yes	No
Azure Bot Service and Azure Cognitive Services can be integrated.	<input checked="" type="radio"/>	<input type="radio"/>
Azure Bot Service engages with customers in a conversational manner.	<input checked="" type="radio"/>	<input type="radio"/>
Azure Bot Service can import frequently asked questions (FAQ) to question and answer sets.	<input type="radio"/>	<input checked="" type="radio"/>

Explanation:

Box 1: Yes -

Azure bot service can be integrated with the powerful AI capabilities with Azure Cognitive Services.

Box 2: Yes -

Azure bot service engages with customers in a conversational manner.

Box 3: No -

The QnA Maker service creates knowledge base, not question and answers sets.

Note: You can use the QnA Maker service and a knowledge base to add question-and-answer support to your bot. When you create your knowledge base, you seed it with questions and answers.

Reference:

<https://docs.microsoft.com/en-us/azure/bot-service/bot-builder-tutorial-add-qna>

Question: 145

CertyIQ

HOTSPOT -

For each of the following statements, select Yes if the statement is true. Otherwise, select No.

NOTE: Each correct selection is worth one point.

Hot Area:

Answer Area

Statements	Yes	No
A webchat bot can interact with users visiting a website	<input type="radio"/>	<input checked="" type="radio"/>
Automatically generating captions for pre-recorded videos is an example of conversational AI	<input checked="" type="radio"/>	<input type="radio"/>
A smart device in the home that responds to questions such as "What will the weather like today?" is an example of conversational AI	<input type="radio"/>	<input checked="" type="radio"/>

Answer:

Answer Area

Statements	Yes	No
A webchat bot can interact with users visiting a website	<input checked="" type="radio"/>	<input type="radio"/>
Automatically generating captions for pre-recorded videos is an example of conversational AI	<input type="radio"/>	<input checked="" type="radio"/>
A smart device in the home that responds to questions such as "What will the weather like today?" is an example of conversational AI	<input checked="" type="radio"/>	<input type="radio"/>

Explanation:

Reference:

<https://docs.microsoft.com/en-us/azure/architecture/reference-architectures/ai/conversational-bot> <https://docs.microsoft.com/en-us/azure/bot-service/bot-builder-webchat-overview?view=azure-bot-service-4.0>

Question: 146

CertyIQ

You have a knowledge base of frequently asked questions (FAQ).
You create a bot that uses the knowledge base to respond to customer requests.
You need to identify what the bot can perform without adding additional skills.
What should you identify?

- A. Register customer purchases.
- B. Register customer complaints.
- C. Answer questions from multiple users simultaneously.
- D. Provide customers with return materials authorization (RMA) numbers.

Answer: C

Explanation:

Reference:

<https://docs.microsoft.com/en-us/azure/cognitive-services/qnamaker/overview/overview>

Question: 147

CertyIQ

HOTSPOT -

For each of the following statements, select Yes if the statement is true. Otherwise, select No.

NOTE: Each correct selection is worth one point.

Hot Area:

Answer Area

Statements	Yes	No
A restaurant can use a chatbot to answer queries through Cortana.	<input type="radio"/>	<input type="radio"/>
A restaurant can use a chatbot to answer inquiries about business hours from a webpage.	<input type="radio"/>	<input type="radio"/>
A restaurant can use a chatbot to automate responses to customer reviews on an external website.	<input type="radio"/>	<input type="radio"/>

Answer:

Answer Area

Statements	Yes	No
A restaurant can use a chatbot to empower customers to make reservations by using a website or an app.	<input checked="" type="radio"/>	<input type="radio"/>
A restaurant can use a chatbot to answer inquiries about business hours from a webpage.	<input checked="" type="radio"/>	<input type="radio"/>
A restaurant can use a chatbot to automate responses to customer reviews on an external website.	<input type="radio"/>	<input checked="" type="radio"/>

Explanation:

Box 1: Yes -

You can create and build a cortana bot using microsoft bot framework.

Note: Connect Cortana Channels -

Login to Azure portal > Select the All Resources > Select Channels > Select Cortana icon. Let us start to configure the Cortana Channel and follow the below steps, at the end of this article you will be able to deploy the Bot into the Cortana.

Etc.

Box 2: Yes -

QnA Maker is an easy-to-use web-based service that makes it easy to power a question-answer application or chatbot from semi-structured content like FAQ documents and product manuals. With QnA Maker, developers can build, train, and publish question and answer bots in minutes.

Box 3: N- A chatbot needs an active session to the user. In scenario 3 there is no back channel available. It is a one-way processing. Never a dialog.

Reference:

<https://www.c-sharpcorner.com/article/create-and-build-a-cortana-bot-using-microsoft-bot-framework/>

Question: 148

HOTSPOT -

For each of the following statements, select Yes if the statement is true. Otherwise, select No.

NOTE: Each correct selection is worth one point.

Hot Area:

Answer Area

Statements

Chatbots can only be built by using custom code.

	Yes	No
<input type="radio"/>	<input type="radio"/>	

The Azure Bot Service provides services that can be used to host conversational bots.

<input type="radio"/>	<input type="radio"/>
-----------------------	-----------------------

Bots built by using the Azure Bot Service can communicate with Microsoft Teams users.

<input type="radio"/>	<input type="radio"/>
-----------------------	-----------------------

Answer:

Answer Area

Statements

Chatbots can only be built by using custom code.

	Yes	No
<input type="radio"/>	<input checked="" type="radio"/>	

The Azure Bot Service provides services that can be used to host conversational bots.

<input checked="" type="radio"/>	<input type="radio"/>
----------------------------------	-----------------------

Bots built by using the Azure Bot Service can communicate with Microsoft Teams users.

<input checked="" type="radio"/>	<input type="radio"/>
----------------------------------	-----------------------

Explanation:

Box 1: No -

Build conversational experiences with Power Virtual Agents and Azure Bot Service

Azure Bot Service provides an integrated development environment for bot building. Its integration with Power Virtual Agents, a fully hosted low-code platform, enables developers of all technical abilities build conversational AI bots "no code needed."

Box 2: Yes -

Box 3: Yes -

You can configure your bot to communicate with people via Microsoft Teams.

Reference:

<https://azure.microsoft.com/en-us/services/bot-services/#overview> <https://docs.microsoft.com/en-us/azure/bot-service/channel-connect-teams>

Question: 149

HOTSPOT -

Select the answer that correctly completes the sentence.

Hot Area:

Answer Area

Computer vision capabilities can be deployed to

develop a text-based chatbot for a website.
identify anomalous customer behavior on an online store.
integrate a facial recognition feature into an app.
suggest automated responses to incoming email.

Answer:**Answer Area**

Computer vision capabilities can be deployed to

- | |
|--|
| develop a text-based chatbot for a website. |
| identify anomalous customer behavior on an online store. |
| integrate a facial recognition feature into an app. |
| suggest automated responses to incoming email. |

Explanation:

Azure's Computer Vision service gives you access to advanced algorithms that process images and return information based on the visual features you're interested in.

- * Optical Character Recognition (OCR)
- * Spatial Analysis
- * Image Analysis

The Image Analysis service extracts many visual features from images, such as objects, faces, adult content, and auto-generated text descriptions. Follow the Image Analysis quickstart to get started.

Reference:

<https://docs.microsoft.com/en-us/azure/cognitive-services/computer-vision/overview>

CertyIQ**Question: 150**

You have an Azure Machine Learning pipeline that contains a Split Data module. The Split Data module outputs to a Train Model module and a Score Model module. What is the function of the Split Data module?

- A. scaling numeric variables so that they are within a consistent numeric range
- B. creating training and validation datasets
- C. diverting records that have missing data
- D. selecting columns that must be included in the model

Answer: B**Explanation:**

B is the answer.

<https://learn.microsoft.com/en-us/azure/machine-learning/component-reference/split-data?view=azureml-api-2>

Use the Split Data component to divide a dataset into two distinct sets.

This component is useful when you need to separate data into training and testing sets. You can also customize the way that data is divided. Some options support randomization of data. Others are tailored for a certain data type or model type.

CertyIQ**Question: 151**

Which statement is an example of a Microsoft responsible AI principle?

- A. AI systems must use only publicly available data
- B. AI systems must be transparent and inclusive

- C. AI systems must keep personal details public
- D. AI systems must protect the interests of the company

Answer: B

Explanation:

Transparency and inclusiveness are the Microsoft AI principle.

<https://learn.microsoft.com/en-us/azure/cloud-adoption-framework/innovate/best-practices/trusted-ai#inclusiveness>

Inclusiveness mandates that AI should consider all human races and experiences, and inclusive design practices can help developers to understand and address potential barriers that could unintentionally exclude people. Where possible, speech-to-text, text-to-speech, and visual recognition technology should be used to empower people with hearing, visual, and other impairments.

Question: 152

CertyIQ

DRAG DROP -

Match the types of natural language processing workloads to the appropriate scenarios.

To answer, drag the appropriate workload type from the column on the left to its scenario on the right. Each workload type may be used once, more than once, or not at all.

NOTE: Each correct match is worth one point.

Select and Place:

Workload types

- Entity recognition
- Key phrase extraction
- Language modeling
- Sentiment analysis
- Speech recognition and speech synthesis
- Translation

Answer Area

- Extracts persons, locations, and organizations from the text.
- Evaluates text along a positive-negative scale.
- Converts text to a different language.

Answer:

Workload types

- Entity recognition
- Key phrase extraction
- Language modeling
- Sentiment analysis
- Speech recognition and speech synthesis
- Translation

Answer Area

- Entity recognition
- Sentiment analysis
- Translation

Explanation:

1. Entity recognition
2. Sentiment analysis
3. Translation

<https://learn.microsoft.com/en-us/azure/cognitive-services/language-service/named-entity-recognition/overview>

Named Entity Recognition (NER) is one of the features offered by Azure Cognitive Service for Language, a collection of machine learning and AI algorithms in the cloud for developing intelligent applications that involve written language. The NER feature can identify and categorize entities in unstructured text. For example: people, places, organizations, and quantities.

<https://learn.microsoft.com/en-us/azure/cognitive-services/language-service/sentiment-opinion-mining/overview>

Sentiment analysis and opinion mining are features offered by Azure Cognitive Service for Language, a collection of machine learning and AI algorithms in the cloud for developing intelligent applications that involve written language. These features help you find out what people think of your brand or topic by mining text for clues about positive or negative sentiment, and can associate them with specific aspects of the text.

Question: 153

CertyIQ

You need to reduce the load on telephone operators by implementing a chatbot to answer simple questions with predefined answers.

Which two AI services should you use to achieve the goal? Each correct answers presents part of the solution.

NOTE: Each correct selection is worth one point.

- A. Azure Machine Learning
- B. Azure Bot Service
- C. Language Service
- D. Translator

Answer: BC

Explanation:

- B. Azure Bot Service
- C. Language Service - QnA is replaced by Language Service

To implement a chatbot for answering simple questions with predefined answers and reduce the load on telephone operators, you should use:

- B. Azure Bot Service - Azure Bot Service is a platform for creating and managing chatbots, making it a suitable choice for building a chatbot to handle simple questions.
- C. Language Service - Language services, including natural language processing capabilities, are essential for understanding user questions and providing relevant responses. This can be integrated into your chatbot to improve its conversational abilities.

Azure Machine Learning (A) and Translator (D) are not typically used as primary components for building chatbots for this specific task. While Azure Machine Learning can be used for more complex machine learning scenarios, it's not necessary for simple question and answer chatbots. Azure Translator is primarily used for language translation tasks and doesn't directly address the goal of reducing the load on telephone operators with a chatbot.

Question: 154

DRAG DROP

Match the principles of responsible AI to the appropriate descriptions.

To answer, drag the appropriate principle from the column on the left to its description on the right. Each principle may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

NOTE: Each correct selection is worth one point.

Principles	Answer Area	
Fairness	<input type="text"/>	AI systems must consistently operate as intended, even under unexpected conditions.
Inclusiveness	<input type="text"/>	AI systems must protect and secure personal and businesses information.
Privacy and security		
Reliability and safety		
...		

Answer:

Principles	Answer Area	
Fairness	<input type="text"/>	Reliability and safety AI systems must consistently operate as intended, even under unexpected conditions.
Inclusiveness	<input type="text"/>	Privacy and security AI systems must protect and secure personal and businesses information.
Privacy and security		
Reliability and safety		
...		

Explanation:

1. Reliability and safety
2. Privacy and security

<https://learn.microsoft.com/en-us/azure/cloud-adoption-framework/innovate/best-practices/trusted-ai#reliability-and-safety>

AI systems need to be reliable and safe in order to be trusted. It's important for a system to perform as it was originally designed and for it to respond safely to new situations. Its inherent resilience should resist intended or unintended manipulation. Rigorous testing and validation should be established for operating conditions to ensure that the system responds safely to edge cases, and A/B testing and champion/challenger methods should be integrated into the evaluation process.

Question: 155

During the process of Machine Learning, when should you review evaluation metrics.

- A. Before you train a model.
- B. After you clean the data.
- C. Before you choose the type of model.
- D. After you test a model on the validation data.

Answer: D

Explanation:

D is the answer.

<https://learn.microsoft.com/en-us/training/modules/use-automated-machine-learning/5-machine-learning-steps>

You can think of the steps in a machine learning process as:

- Prepare data: Identify the features and label in a dataset. Pre-process, or clean and transform, the data as needed.
- Train model: Split the data into two groups, a training and a validation set. Train a machine learning model using the training data set. Test the machine learning model for performance using the validation data set.
- Evaluate performance: Compare how close the model's predictions are to the known labels.
- Deploy a predictive service: After you train a machine learning model, you can deploy the model as an application on a server or device so that others can use it.

Question: 156

CertyIQ

You have a natural language processing (NLP) model that was created by using data obtained without permission.

Which Microsoft principle for responsible AI does this breach?

- A. reliability and safety
- B. privacy and security
- C. inclusiveness
- D. transparency

Answer: B

Explanation:

B. privacy and security

Using data obtained without permission breaches the Microsoft principle for responsible AI related to "privacy and security." This principle emphasizes the importance of respecting the privacy of individuals and securing their data. Data should be collected and used in a legal and ethical manner, and obtaining data without proper consent or permission can lead to privacy and security violations.

Question: 157

CertyIQ

HOTSPOT

-

Select the answer that correctly completes the sentence.

Answer Area

Ensuring an AI system does not provide a prediction when important fields contain unusual or missing values is principle for responsible AI.

- an inclusiveness
- a privacy and security
- a reliability and safety
- a transparency

Answer:

Answer Area

Ensuring an AI system does not provide a prediction when important fields contain unusual or missing values is principle for responsible AI.

- an inclusiveness
- a privacy and security
- a reliability and safety**
- a transparency

Explanation:

a reliability and safety

<https://learn.microsoft.com/en-us/azure/cloud-adoption-framework/innovate/best-practices/trusted-ai#reliability-and-safety>

AI systems need to be reliable and safe in order to be trusted. It's important for a system to perform as it was originally designed and for it to respond safely to new situations. Its inherent resilience should resist intended or unintended manipulation. Rigorous testing and validation should be established for operating conditions to ensure that the system responds safely to edge cases, and A/B testing and champion/challenger methods should be integrated into the evaluation process.

Question: 158

DRAG DROP

CertyIQ

Match the services to the appropriate descriptions.

To answer, drag the appropriate service from the column on the left to its description on the right. Each service may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

NOTE: Each correct selection is worth one point.

Services	Answer Area
Azure Storage	
Azure Bot Service	
Language Service	
Speech	

Answer:

Services	Answer Area
Azure Storage	
Azure Bot Service	
Language Service	
Speech	

Explanation:

1. Language Service

2. Speech

<https://learn.microsoft.com/en-us/training/modules/build-faq-chatbot-qna-maker-azure-bot-service/2-get-started-knowledge-base>

The Language service includes a custom question answering feature that enables you to create a knowledge base of question and answer pairs that can be queried using natural language input.

<https://learn.microsoft.com/en-us/azure/cognitive-services/speech-service/overview>

The Speech service provides speech to text and text to speech capabilities with an Speech resource. You can transcribe speech to text with high accuracy, produce natural-sounding text to speech voices, translate spoken audio, and use speaker recognition during conversations.

Question: 159

Which machine learning technique can be used for anomaly detection?

- A. A machine learning technique that classifies objects based on user supplied images.
- B. A machine learning technique that understands written and spoken language.
- C. A machine learning technique that classifies images based on their contents.
- D. A machine learning technique that analyzes data over time and identifies unusual changes.

Answer: D

Explanation:

D is the answer.

<https://learn.microsoft.com/en-us/azure/cognitive-services/anomaly-detector/overview>

Anomaly Detector is an AI service with a set of APIs, which enables you to monitor and detect anomalies in your time series data with little machine learning (ML) knowledge, either batch validation or real-time inference.

CertyIQ

Question: 160

You have an AI-based loan approval system.

During testing, you discover that the system has a gender bias.

Which responsible AI principle does this violate?

- A. accountability
- B. reliability and safety
- C. transparency
- D. fairness

Answer: D

Explanation:

D is the answer.

<https://learn.microsoft.com/en-us/azure/machine-learning/concept-responsible-ai?view=azureml-api-2#fairness-and-inclusiveness>

AI systems should treat everyone fairly and avoid affecting similarly situated groups of people in different ways. For example, when AI systems provide guidance on medical treatment, loan applications, or employment, they should make the same recommendations to everyone who has similar symptoms, financial circumstances, or professional qualifications.

CertyIQ

Question: 161

You are developing a system to predict the prices of insurance for drivers in the United Kingdom.

You need to minimize bias in the system.

What should you do?

- A. Remove information about protected characteristics from the data before sampling.

- B. Take a training sample that is representative of the population in the United Kingdom.
- C. Create a training dataset that uses data from global insurers.
- D. Take a completely random training sample.

Answer: B

Explanation:

- B. Take a training sample that is representative of the population in the United Kingdom.

To minimize bias in the system, it's important that your training data is representative of the population you're modeling. This helps ensure that the model's predictions are valid for the full range of drivers in the United Kingdom.

While option A (Remove information about protected characteristics from the data before sampling) could help in some cases to reduce direct discrimination, it might not be sufficient to minimize all types of biases, as some of these characteristics might be indirectly encoded in the remaining features.

Option C (Create a training dataset that uses data from global insurers) may introduce more bias since driving conditions, laws, and demographics vary greatly by country.

Option D (Take a completely random training sample) could still introduce bias if the original data pool is not representative of the population you're interested in.

Question: 162

CertyIQ

HOTSPOT

-

Select the answer that correctly completes the sentence.

Answer Area

Azure Machine Learning designer lets you create machine learning models by

adding and connecting modules on a visual canvas.
automatically performing common data preparation tasks.
automatically selecting an algorithm to build the most accurate model.
using a code-first notebook experience.

Answer:

Answer Area

Azure Machine Learning designer lets you create machine learning models by

adding and connecting modules on a visual canvas.
automatically performing common data preparation tasks.
automatically selecting an algorithm to build the most accurate model.
using a code-first notebook experience.

Question: 163

CertyIQ

You have a dataset.

You need to build an Azure Machine Learning classification model that will identify defective products.

What should you do first?

- A. Load the dataset.
- B. Create a clustering model.
- C. Split the data into training and testing datasets.
- D. Create a classification model.

Answer: A

Explanation:

First at all you need to load the dataset

CertyIQ

Question: 164

You use Azure Machine Learning designer to build a model pipeline.

What should you create before you can run the pipeline?

- A. a registered model
- B. a compute resource
- C. a Jupyter notebook

Answer: B

CertyIQ

Question: 165

DRAG DROP

-

Match the tool to the Azure Machine Learning task.

To answer, drag the appropriate tool from the column on the left to its tasks on the right. Each tool may be used once, more than once, or not at all.

NOTE: Each correct selection is worth one point.

Tools	Answer Area
Automated machine learning (automated ML)	<input type="text"/>
The Azure portal	<input type="text"/>
Machine Learning designer	<input type="text"/>

Create a Machine Learning workspace
Use a drag-and-drop interface used to train and deploy models
Use a wizard to select configurations for a machine learning run

Answer:

Tools
Automated machine learning (automated ML)
The Azure portal
Machine Learning designer
...

Answer Area	
The Azure portal	Create a Machine Learning workspace
Machine Learning designer	Use a drag-and-drop interface used to train and deploy models
Automated machine learning (automated ML)	Use a wizard to select configurations for a machine learning run

Question: 166

CertyIQ

You need to create a customer support solution to help customers access information. The solution must support email, phone, and live chat channels.

Which type of AI solution should you use?

- A. machine learning
- B. computer vision
- C. chatbot
- D. natural language processing (NLP)

Answer: C

Question: 167

CertyIQ

DRAG DROP

Match the types of AI workloads to the appropriate scenarios.

To answer, drag the appropriate workload type from the column on the left to its scenario on the right. Each workload type may be used once, more than once, or not at all.

NOTE: Each correct selection is worth one point.

Workload Types

Anomaly detection

Computer vision

Machine Learning (Clustering)

Natural language processing

Answer Area

Workload Type

Workload Type

Workload Type

Workload Type

Identify handwritten letters.

Predict the sentiment of a social media post.

Identify an unusual credit card payment.

Group animals based on multiple measurements.

Answer:

Answer Area

Computer vision Identify handwritten letters.

Natural language processing Predict the sentiment of a social media post.

Anomaly detection Identify an unusual credit card payment.

Machine Learning (Clustering) Group animals based on multiple measurements.

Question: 168

CertyIQ

Predicting how many vehicles will travel across a bridge on a give day is an example of _____.

Select the answer that correctly completes the sentence.

- A. regression
- B. translation
- C. classification
- D. clustering

Answer: A

Question: 169

CertyIQ

In a machine learning model, the data that is used as inputs are called _____.

Select the answer that correctly completes the sentence.

- A. dataset
- B. labels
- C. variables

Answer: C

Explanation:

Labels is indeed the output. Would prefer to say features as well, but features and variables refer to the same thing in the context of machine learning, which is the input data used to train the model. A dataset is a collection of data points, each of which contains one or more features. So would go for C.

Question: 170

CertyIQ

HOTSPOT

-

Select the answer that correctly completes the sentence.

Answer Area

Using Recency, Frequency, and Monetary (RFM) values to identify segments of a customer base is an example of

- clustering.
- regression.
- classification.
- regularization.

Answer:

Answer Area

Using Recency, Frequency, and Monetary (RFM) values to identify segments of a customer base is an example of

- clustering.
- regression.
- classification.
- regularization.

Explanation:

Clustering:

RFM analysis does not involve training a machine learning model to predict a specific outcome, it does involve clustering data based on specific criteria, which makes it more of a form of clustering rather than classification. So would go for clustering.

Question: 171

CertyIQ

DRAG DROP

You plan to deploy an Azure Machine Learning model by using the Machine Learning designer.

Which four actions should you perform in sequence? To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.

Actions

Train the model.

Split the data randomly into training data and validation data.

Evaluate the model against the original dataset.

Evaluate the model against the validation dataset.

Ingest and prepare a dataset.

Answer area**Answer:****Actions**

Evaluate the model against the original dataset.

Answer area

Ingest and prepare a dataset.

Split the data randomly into training data and validation data.

Train the model.

Evaluate the model against the validation dataset.

**Question: 172****CertyIQ****HOTSPOT**

-

For each of the following statements, select Yes if the statement is true. Otherwise, select No.

NOTE: Each correct selection is worth one point.

Answer Area

Statements	Yes	No
Organizing documents into groups based on different usage statistics is an example of clustering.	<input type="radio"/>	<input type="radio"/>
Grouping similar patients based on symptoms and diagnostic test results is an example of clustering.	<input type="radio"/>	<input type="radio"/>
Predicting whether a person will develop mild, moderate, or severe allergy symptoms based on pollen count is an example of clustering.	<input type="radio"/>	<input type="radio"/>

Answer:

Answer Area

Statements	Yes	No
Organizing documents into groups based on different usage statistics is an example of clustering.	<input checked="" type="checkbox"/>	<input type="radio"/>
Grouping similar patients based on symptoms and diagnostic test results is an example of clustering.	<input checked="" type="checkbox"/>	<input type="radio"/>
Predicting whether a person will develop mild, moderate, or severe allergy symptoms based on pollen count is an example of clustering.	<input type="radio"/>	<input checked="" type="checkbox"/>

Question: 173

CertyIQ

HOTSPOT

Select the answer that correctly completes the sentence.

Answer Area

When building a regression model, labels must have a data type of

A dropdown menu containing four items: "boolean.", "datetime.", "numeric.", and "text.". The "numeric." option is highlighted with a red rectangle.

Answer:

Answer Area

When building a regression model, labels must have a data type of

A dropdown menu containing four items: "boolean.", "datetime.", "numeric.", and "text.". The "numeric." option is highlighted with a red rectangle.

Question: 174

CertyIQ

You need to create a clustering model and evaluate the model by using Azure Machine Learning designer.

What should you do?

- A. Split the original dataset into a dataset for training and a dataset for testing. Use the testing dataset for evaluation.
- B. Use the original dataset for training and evaluation.
- C. Split the original dataset into a dataset for features and a dataset for labels. Use the features dataset for evaluation.
- D. Split the original dataset into a dataset for training and a dataset for testing. Use the training dataset for evaluation.

Answer: A

Explanation:

Split the original dataset into a dataset for training and a dataset for testing. Use the testing dataset for evaluation.

Question: 175

CertyIQ

You have a dataset that contains the columns shown in the following table.

Name	Type
ColumnA	Integer
ColumnB	Numeric
ColumnC	Numeric
ColumnD	Numeric
ColumnE	Numeric

You have a machine learning model that predicts the value of ColumnE based on the other numeric columns.

Which type of model is this?

- A. analysis
- B. clustering
- C. regression

Answer: C

Explanation:

regression

CertyIQ

Question: 176

You need to track multiple versions of a model that was trained by using Azure Machine Learning.

What should you do?

- A. Explain the model.
- B. Register the model.
- C. Register the training data.
- D. Provision an inference cluster.

Answer: B

Explanation:

Register the model.

CertyIQ

Question: 177

You need to identify groups of rows with similar numeric values in a dataset.

Which type of machine learning should you use?

- A. clustering
- B. regression
- C. classification

Answer: A

Explanation:

clustering

Question: 178

CertyIQ

HOTSPOT

Select the answer that correctly completes the sentence.

Answer Area

A banking system that predicts whether a loan will be repaid
is an example of the ▾ type of machine learning.

- clustering
- regression
- classification

Answer:

Answer Area

A banking system that predicts whether a loan will be repaid
is an example of the ▾ type of machine learning.

- clustering
- regression
- classification

Explanation:

Classification, because there would be an answer like yes or no and not a value like \$10.000

Question: 179

CertyIQ

HOTSPOT

Select the answer that correctly completes the sentence.

Answer Area

models can be used to predict the sale price of auctioned items.

Classification
Clustering
Regression

Answer:

Answer Area

models can be used to predict the sale price of auctioned items.

Classification
Clustering
Regression

Question: 180

CertyIQ

A historian can use _____ to digitize newspaper articles.

Select the answer that correctly completes the sentence.

- A. Object detection
- B. Facial recognition
- C. Image classification
- D. Optical character recognition (OCR)

Answer: D

Question: 181

CertyIQ

HOTSPOT

For each of the following statements, select Yes if the statement is true. Otherwise, select No.

NOTE: Each correct selection is worth one point.

Answer Area

Statements	Yes	No
Object detection can identify the location of a damaged product in an image.	<input type="radio"/>	<input type="radio"/>
Object detection can identify multiple instances of a damaged product in an image.	<input type="radio"/>	<input type="radio"/>
Object detection can identify multiple types of damaged products in an image.	<input type="radio"/>	<input type="radio"/>

Answer:

Answer Area

Statements

Object detection can identify the location of a damaged product in an image.

Yes

No

Object detection can identify multiple instances of a damaged product in an image.

Object detection can identify multiple types of damaged products in an image.

Explanation:

YYY

Here are the statements with their corresponding answers:

Object detection can identify the location of a damaged product in an image.

True: Object detection can be used to locate and outline the position of a specific object or region in an image, including a damaged product.

Object detection can identify multiple instances of a damaged product in an image.

True: Object detection is capable of identifying and locating multiple instances of a specified object, such as multiple damaged products in an image.

Object detection can identify multiple types of damaged products in an image.

True: Object detection can identify and classify different types of objects, including multiple types of damaged products in an image, if it has been trained to do so.

Question: 182

CertyIQ

You need to create a model that labels a collection of your personal digital photographs.

Which Azure Cognitive Services service should you use?

- A. Form Recognizer
- B. Custom Vision
- C. Language
- D. Computer Vision

Answer: B

Explanation:

B. Custom Vision

With Custom Vision, users can upload their own images and labels, and train a model to recognize specific objects or patterns.

Question: 183

CertyIQ

HOTSPOT

Select the answer that correctly completes the sentence.

Answer Area

- Object detection
- Image description
- Image classification
- Optical character recognition (OCR)

is used to identify multiple types of items in one image.

Answer:

Answer Area

- Object detection
- Image description
- Image classification
- Optical character recognition (OCR)

is used to identify multiple types of items in one image.

Question: 184

HOTSPOT

Select the answer that correctly completes the sentence.

Answer Area

Identifying whether a kiosk user is annoyed by monitoring a video feed from the kiosk is an example of

- face detection.
- facial analysis.
- facial recognition.
- optical character recognition (OCR).

Answer:

Answer Area

Identifying whether a kiosk user is annoyed by monitoring a video feed from the kiosk is an example of

- face detection.
- facial analysis.**
- facial recognition.
- optical character recognition (OCR).

Question: 185

CertyIQ

DRAG DROP

Match the Azure Cognitive Services to the appropriate actions.

To answer, drag the appropriate service from the column on the left to its action on the right. Each service may be used once, more than once, or not at all.

NOTE: Each correct selection is worth one point.

Services

- Custom Vision
- Face
- Form Recognizer

Answer Area

-
-
-
-

Identify objects in an image.

Automatically import data from an invoice to a database.

Identify people in an image.

Answer:

Answer Area

- Custom Vision
- Form Recognizer
- Face

Identify objects in an image.

Automatically import data from an invoice to a database.

Identify people in an image.

Question: 186**CertyIQ**

HOTSPOT

Select the answer that correctly completes the sentence.

Answer Area

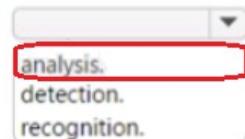
An AI solution that helps photographers take better portrait photographs by providing feedback on exposure, noise, and occlusion is an example of facial

-
- analysis.
- detection.
- recognition.

Answer:

Answer Area

An AI solution that helps photographers take better portrait photographs by providing feedback on exposure, noise, and occlusion is an example of facial



Explanation:

Answer : Analysis

An AI solution that helps photographers to take better pictures by providing feedback on exposure, noise, and occlusion is an example of facial "analysis" or "photo analysis."

In this context, the AI system is analyzing the photo quality and characteristics, such as exposure (brightness and contrast), noise (graininess or pixel-level disturbances), and occlusion (obstructions or unwanted objects). The AI's analysis can then provide feedback to the photographer to improve the composition and settings, resulting in better photographs. While this specific example focuses on photo quality aspects, facial analysis may also involve analyzing and detecting faces within images, recognizing facial expressions, emotions, or attributes, but that doesn't seem to be the focus in this particular case.

CertyIQ

Question: 187

Your company manufactures widgets.

You have 1,000 digital photos of the widgets.

You need to identify the location of the widgets within the photos.

What should you use?

- A. Computer Vision Spatial Analysis
- B. Custom Vision object detection
- C. Computer Vision Image Analysis
- D. Custom Vision classification

Answer: B

Explanation:

Custom Vision object detection

CertyIQ

Question: 188

You need to convert handwritten notes into digital text.

Which type of computer vision should you use?

- A. facial detection
- B. optical character recognition (OCR)
- C. image classification

D. object detection

Answer: B

Explanation:

optical character recognition (OCR)

CertyIQ

Question: 189

HOTSPOT

Select the answer that correctly completes the sentence.

Answer Area

 is used to identify multiple types of items in one image.

- Image classification
- Image description
- Object detection
- Optical character recognition (OCR)

Answer:

Answer Area

 is used to identify multiple types of items in one image.

- Image classification
- Image description
- Object detection**
- Optical character recognition (OCR)

Question: 190

CertyIQ

You need to develop a mobile app for employees to scan and store their expenses while travelling.

Which type of computer vision should you use?

- A. face detection
- B. image classification
- C. object detection
- D. optical character recognition (OCR)

Answer: D

Explanation:

Question: 191

HOTSPOT

Select the answer that correctly completes the sentence.

Answer Area

You can use the service to train an object detection model by using your own images.

- Computer Vision
- Custom Vision
- Form Recognizer
- Azure Video Analyzer for Media

Answer:**Answer Area**

You can use the service to train an object detection model by using your own images.

- Computer Vision
- Custom Vision**
- Form Recognizer
- Azure Video Analyzer for Media

Explanation:

Right answer is Custom vision.

Question: 192

HOTSPOT

To complete the sentence, select the appropriate option in the answer area.

Answer Area

An AI solution that helps photographers take better portrait photographs by providing feedback on exposure, noise, and occlusion is an example of facial

- analysis.
- detection.
- recognition.

Answer:

Answer Area

An AI solution that helps photographers take better portrait photographs by providing feedback on exposure, noise, and occlusion is an example of facial

analysis.
detection.
recognition.

Explanation:

Answer : Analysis

An AI solution that helps photographers to take better pictures by providing feedback on exposure, noise, and occlusion is an example of facial "analysis" or "photo analysis."

In this context, the AI system is analyzing the photo quality and characteristics, such as exposure (brightness and contrast), noise (graininess or pixel-level disturbances), and occlusion (obstructions or unwanted objects). The AI's analysis can then provide feedback to the photographer to improve the composition and settings, resulting in better photographs. While this specific example focuses on photo quality aspects, facial analysis may also involve analyzing and detecting faces within images, recognizing facial expressions, emotions, or attributes, but that doesn't seem to be the focus in this particular case.

Question: 193

CertyIQ

DRAG DROP

Match the Azure Cognitive Services to the appropriate AI workloads.

To answer, drag the appropriate service from the column on the left to its workload on the right. Each service may be used once, more than once, or not at all.

NOTE: Each correct match is worth one point.

Services

Custom Vision

Face

Form Recognized

Answer Area

Identify objects in an image.

Automatically import data from an invoice to a database.

Identify people in an image.

Answer:

Answer Area

Custom Vision

Identify objects in an image.

Form Recognized

Automatically import data from an invoice to a database.

Face

Identify people in an image.

Question: 194

CertyIQ

You need to implement a pre-built solution that will identify well-known brands in digital photographs.

Which Azure Cognitive Services service should you use?

- A. Custom Vision
- B. Form Recognizer
- C. Face
- D. Computer Vision

Answer: D

Explanation:

Computer Vision

Question: 195

CertyIQ

Natural language processing can be used to _____.

Select the answer that correctly completes the sentence.

- A.Analyze video content
- B.Generate speech
- C.Classify email messages as work-related or personal.
- D.Classify images

Answer: C

Explanation:

Classify email messages as work-related or personal.

Question: 196

CertyIQ

You plan to develop a bot that will enable users to query a knowledge base by using natural language processing.

Which two services should you include in the solution? Each correct answer presents part of the solution.

NOTE: Each correct selection is worth one point.

- A. Language Service
- B. Azure Bot Service
- C. Form Recognizer
- D. Anomaly Detector

Answer: AB

Explanation:

- A. Language Service
- B. Azure Bot Service

Question: 197

CertyIQ

HOTSPOT

For each of the following statements, select Yes if the statement is true. Otherwise, select No.

NOTE: Each correct selection is worth one point.

Answer Area

Statements	Yes	No
The following service call will accept English text as an input and output Italian and French text. <code>/translate?from=it&to=fr&to=en</code>	<input type="radio"/>	<input type="radio"/>
The following service call will accept English text as an input and output Italian and French text. <code>/translate?from=en&to=fr&to=it</code>	<input type="radio"/>	<input type="radio"/>
The Translator service can be used to translate documents from English to French.	<input type="radio"/>	<input type="radio"/>

Answer:

Answer Area

Statements	Yes	No
The following service call will accept English text as an input and output Italian and French text. <code>/translate?from=it&to=fr&to=en</code>	<input type="radio"/>	<input checked="" type="checkbox"/>
The following service call will accept English text as an input and output Italian and French text. <code>/translate?from=en&to=fr&to=it</code>	<input checked="" type="checkbox"/>	<input type="radio"/>
The Translator service can be used to translate documents from English to French.	<input checked="" type="checkbox"/>	<input type="radio"/>

Question: 198

CertyIQ

An app that analyzes social media posts to identify their tone is an example of which type of natural language processing (NLP) workload?

- A. sentiment analysis
- B. speech recognition
- C. key phrase extraction
- D. entity recognition

Answer: A

Explanation:

sentiment analysis

CertyIQ

Question: 199

You are building a chatbot that will use natural language processing (NLP) to perform the following actions based on the text input of a user.

- Accept customer orders.
- Retrieve support documents.
- Retrieve order status updates.

Which type of NLP should you use?

- A. sentiment analysis
- B. named entity recognition
- C. translation
- D. language modeling

Answer: B

Explanation:

named entity recognition

CertyIQ

Question: 200

DRAG DROP

-

Match the Azure Cognitive Services service to the appropriate actions.

To answer, drag the appropriate service from the column on the left to its action on the right. Each service may be used once, more than once, or not at all.

NOTE: Each correct selection is worth one point.

Azure Cognitive Services

- Language service
- Speech
- Translator

Answer Area



- Convert spoken requests into text.
- Identify the intent of a user's requests.
- Apply intent to entities and utterances.

Answer:

Azure Cognitive Services

- Language service
- Speech
- Translator

Answer Area

- Speech
- Language service
- Language service

Convert spoken requests into text.
Identify the intent of a user's requests.
Apply intent to entities and utterances.

Question: 201**CertyIQ****HOTSPOT**

For each of the following statements, select Yes if the statement is true. Otherwise, select No.

NOTE: Each correct selection is worth one point.

Answer Area

Statements	Yes	No
A webchat bot can interact with users visiting a website.	<input type="radio"/>	<input type="radio"/>
Automatically generating captions for pre-recorded videos is an example of natural language processing.	<input type="radio"/>	<input type="radio"/>
A smart device in the home that responds to questions such as "What will the weather be like today?" is an example of natural language processing.	<input type="radio"/>	<input type="radio"/>

Answer:**Statements****Yes** **No**

A webchat bot can interact with users visiting a website.

Automatically generating captions for pre-recorded videos is an example of natural language processing.

A smart device in the home that responds to questions such as "What will the weather be like today?" is an example of natural language processing.

 Explanation:

1. Yes
2. Yes
3. Yes

1. A webchat bot can interact with users visiting a website:

Yes, a webchat bot can be implemented on a website to provide automated responses and interact with users in a conversational manner.

2. Speech and Conversational AI workloads come under NLP.

3. A smart device in the home that responds to questions such as "What will the weather be like today?" is an example of natural language processing:

Yes, a smart device that can understand and respond to natural language queries or commands, such as asking about the weather, relies on natural language processing techniques to interpret and process the user's input and provide a relevant response. (Chat GPT)

Question: 202

CertyIQ

You have a website that includes customer reviews.

You need to store the reviews in English and present the reviews to users in their respective language by recognizing each user's geographical location.

Which type of natural language processing workload should you use?

- A. key phrase extraction
- B. speech recognition
- C. language modeling
- D. translation

Answer: D

Explanation:

This should be translation. for this specific use case, the best option would be the Azure Translator Text API.

The Translator Text API is a cloud-based machine translation service that can translate text between multiple languages in real-time. It supports a wide range of languages and provides language detection capabilities that can automatically identify the language of the input text. It can also detect the user's location based on their IP address or browser settings and automatically translate the reviews to the user's preferred language.

Question: 203

CertyIQ

HOTSPOT

-

For each of the following statements, select Yes if the statement is true. Otherwise, select No.

NOTE: Each correct selection is worth one point.

Answer Area

Statements	Yes	No
Chatbots can support voice input.	<input type="radio"/>	<input type="radio"/>
A separate chatbot is required for each communication channel.	<input type="radio"/>	<input type="radio"/>
Chatbots manage conversation flows by using a combination of natural language and constrained option responses.	<input type="radio"/>	<input type="radio"/>

Answer:

Answer Area

Statements	Yes	No
Chatbots can support voice input.	<input checked="" type="checkbox"/>	<input type="radio"/>
A separate chatbot is required for each communication channel.	<input type="radio"/>	<input checked="" type="checkbox"/>
Chatbots manage conversation flows by using a combination of natural language and constrained option responses.	<input checked="" type="checkbox"/>	<input type="radio"/>

Question: 204

CertyIQ

HOTSPOT

-

For each of the following statements, select Yes if the statement is true. Otherwise, select No.

NOTE: Each correct selection is worth one point.

Answer Area

Statements	Yes	No
A bot that responds to queries by internal users is an example of a natural language processing workload.	<input type="radio"/>	<input type="radio"/>
A mobile application that displays images relating to an entered search term is an example of a natural language processing workload.	<input type="radio"/>	<input type="radio"/>
A web form used to submit a request to reset a password is an example of a natural language processing workload.	<input type="radio"/>	<input type="radio"/>

Answer:

Answer Area

Statements	Yes	No
A bot that responds to queries by internal users is an example of a natural language processing workload.	<input checked="" type="checkbox"/>	<input type="radio"/>
A mobile application that displays images relating to an entered search term is an example of a natural language processing workload.	<input type="radio"/>	<input checked="" type="checkbox"/>
A web form used to submit a request to reset a password is an example of a natural language processing workload.	<input type="radio"/>	<input checked="" type="checkbox"/>

Explanation:

YNN. Second one is Azure cognitive search

Question: 205

CertyIQ

You have a solution that analyzes social media posts to extract the mentions of city names and the city names discussed most frequently.

Which type of natural language processing (NLP) workload does the solution use?

- A.speech recognition
- B.sentiment analysis
- C.key phrase extraction

D.entity recognition

Answer: D

Explanation:

entity recognition

City names and the city location

CertyIQ

Question: 206

HOTSPOT

-
For each of the following statements, select Yes if the statement is true. Otherwise, select No.

NOTE: Each correct selection is worth one point.

Answer Area

Statements	Yes	No
You can use Language Service's question answering to query an Azure SQL database.	<input type="radio"/>	<input type="radio"/>
You should use Language Service's question answering when you want a knowledge base to provide the same answer to different users who submit similar questions.	<input type="radio"/>	<input type="radio"/>
Language Service's question answering can determine the intent of a user utterance.	<input type="radio"/>	<input type="radio"/>

Answer:

Answer Area

Statements	Yes	No
You can use Language Service's question answering to query an Azure SQL database.	<input type="radio"/>	<input checked="" type="radio"/>
You should use Language Service's question answering when you want a knowledge base to provide the same answer to different users who submit similar questions.	<input checked="" type="radio"/>	<input type="radio"/>
Language Service's question answering can determine the intent of a user utterance.	<input type="radio"/>	<input checked="" type="radio"/>

Question: 207

CertyIQ

You are developing a solution that uses the Language service.

You need to identify the main talking points in a collection of documents.

Which type of natural language processing should you use?

- A. language detection
- B. sentiment analysis

- C. entity recognition
- D. key phrase extraction

Answer: D

Explanation:

Broad entity extraction: Identify important concepts in text, including key

Key phrase extraction/ Broad entity extraction: Identify important concepts in text, including key phrases and named entities such as people, places, and organizations.

Reference:

<https://docs.microsoft.com/en-us/azure/architecture/data-guide/technology-choices/natural-language-processing>

Question: 208

CertyIQ

DRAG DROP

-

You are designing a system that will generate insurance quotes automatically.

Match the Microsoft responsible AI principles to the appropriate requirements.

To answer, drag the appropriate principle from the column on the left to its requirement on the right. Each principle may be used once, more than once, or not at all.

NOTE: Each correct match is worth one point.

Principles

Answer Area

Accountability	
Fairness	A customer's personal information must be visible only to staff who are involved in the decision-making process:
Inclusiveness	The decision-making process must be recorded so that staff can identify the reasoning behind a particular quote:
Privacy and security	The system must be accessible to customers who use screen readers or other assistive technology:
Reliability and safety	
Transparency	

Answer:

Principles

Answer Area

Accountability

Fairness

Inclusiveness

Privacy and security

Reliability and safety

Transparency

A customer's personal information must be visible only to staff who are involved in the decision-making process:

Privacy and security

The decision-making process must be recorded so that staff can identify the reasoning behind a particular quote:

Transparency

The system must be accessible to customers who use screen readers or other assistive technology:

Inclusiveness

Explanation:

Privacy and security: A customer's personal information must be visible only to staff who are involved in the decision-making process to ensure the privacy and security of sensitive data. Transparency: The decision-making process must be recorded so that staff can identify the reasoning behind a particular quote, promoting transparency and accountability. Inclusiveness: The system must be accessible to customers who use screen readers or other assistive technology, ensuring inclusiveness and providing equal access to all users.

Question: 209

CertyIQ

Which type of natural language processing (NLP) entity is used to identify a phone number?

- A.regular expression
- B.machine-learned
- C.list
- D.Pattern.any

Answer: A

Explanation:

A is the answer.

<https://learn.microsoft.com/en-us/azure/cognitive-services/luis/reference-entity-regular-expression?tabs=V2> A regular expression entity extracts an entity based on a regular expression pattern you provide.

IMHO Regular expression is the correct answer. Regular expressions are commonly used to define patterns for identifying phone numbers. By defining a regular expression pattern that matches the format of a phone number, you can effectively extract phone numbers from text using NLP techniques.

Question: 210

CertyIQ

HOTSPOT

-

To complete the sentence, select the appropriate option in the answer area.

Answer Area

Returning a bounding box that indicates the location of a vehicle in an image is an example of

- image classification
- object detection
- optical character recognition (OCR)
- facial detection

Answer:

Answer Area

Returning a bounding box that indicates the location of a vehicle in an image is an example of

- image classification
- object detection
- optical character recognition (OCR)
- facial detection

Explanation:

Object detection

Question: 211

CertyIQ

Your company is exploring the use of voice recognition technologies in its smart home devices. The company wants to identify any barriers that might unintentionally leave out specific user groups.

This is an example of which Microsoft guiding principle for responsible AI?

- A.accountability
- B.fairness
- C.privacy and security
- D.inclusiveness

Answer: D

Explanation:

inclusiveness is a correct answer.

Question: 212

CertyIQ

HOTSPOT

-

You have a large dataset that contains motor vehicle sales data.

You need to train an automated machine learning (automated ML) model to predict vehicle sale values based on the type of vehicle.

Which task should you select? To answer, select the appropriate task in the answer area.

NOTE: Each correct selection is worth one point.

Answer Area

Select task and settings

Select the machine learning task type for the experiment. To fine tune the experiment, choose additional configuration or featurization settings.

Classification

To predict one of several categories in the target column. yes/no, blue, red, green.

Regression

To predict continuous numeric values.

Time series forecasting

To predict values based on time.

Natural Language Processing (preview)

Predict based on text-only data types using multi-class or multi-label classification.

Computer Vision (preview)

Multi-class or multi-label image classification, object detection, and instance segmentation.

 View additional configuration settings  View featurization settings

Answer:

Answer Area

Select task and settings

Select the machine learning task type for the experiment. To fine tune the experiment, choose additional configuration or featurization settings.

Classification

To predict one of several categories in the target column: yes/no, blue, red, green.

Regression

To predict continuous numeric values.

Time series forecasting

To predict values based on time.

Natural Language Processing (preview)

Predict based on text-only data types using multi-class or multi-label classification.

Computer Vision (preview)

Multi-class or multi-label image classification, object detection, and instance segmentation.

[View additional configuration settings](#)

[View featurization settings](#)

CertyIQ

Question: 213

HOTSPOT

Select the answer that correctly completes the sentence.

Answer Area

When evaluating the performance of a model, the

AUC metric
confusion matrix
ROC curve
threshold

displays the predicted and actual positives and negatives by using a grid of 0 and 1 values.

Answer:

Answer Area

When evaluating the performance of a model, the

AUC metric
confusion matrix
ROC curve
threshold

displays the predicted and actual positives and negatives by using a grid of 0 and 1 values.

Explanation:

confusion matrix

Question: 214

CertyIQ

You need to convert receipts into transactions in a spreadsheet. The spreadsheet must include the date of the transaction, the merchant, the total spent, and any taxes paid.

Which Azure AI service should you use?

- A.Custom Vision
- B.Form Recognizer
- C.Face
- D.Language

Answer: B

Explanation:

Form Recognizer

Question: 215

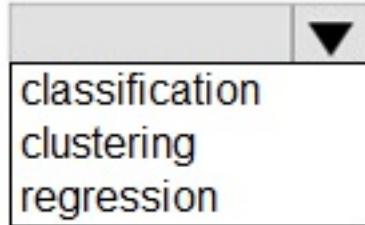
CertyIQ

HOTSPOT

Select the answer that correctly completes the sentence.

Answer Area

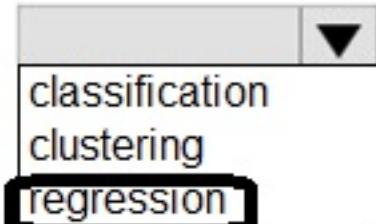
Predicting how many vehicles will travel across a bridge on a given day is an example of



Answer:

Answer Area

Predicting how many vehicles will travel across a bridge on a given day is an example of

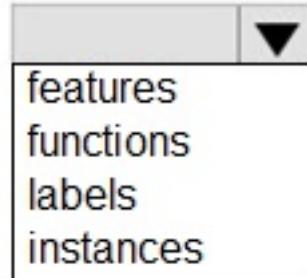


HOTSPOT

Select the answer that correctly completes the sentence.

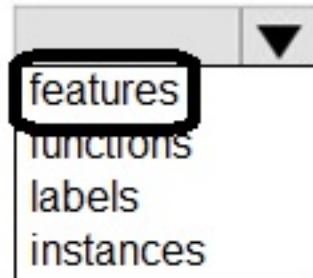
Answer Area

In a machine learning model, the data that is used as inputs are called

**Answer:**

Answer Area

In a machine learning model, the data that is used as inputs are called

**Explanation:**

Correct answer is Features.

You have a security system that analyzes images from CCTV to provide authorized staff entry into restricted area.

Which type of computer vision does the system use?

- A.optical character recognition (OCR)
- B.semantic segmentation
- C.facial detection and facial recognition
- D.image analysis

Answer: C

Explanation:

facial detection and facial recognition.

CertyIQ**Question: 218**

For which two workloads can you use computer vision? Each correct answer presents a complete solution.

NOTE: Each correct selection is worth one point.

- A.assigning the color pixels in an image to object names
- B.detecting inconsistencies and anomalies in a stream of data
- C.create visual representations of numerical data
- D.create photorealistic images by using three-dimensional models
- E.describe the contents of an image

Answer: AE**Explanation:**

- A .assigning the color pixels in an image to object names
- E. describing the contents of an image

CertyIQ**Question: 219**

You have an app that identifies the coordinates of a product in an image of a supermarket shelf.

Which service does the app use?

- A.Custom Vision classification
- B.Custom Vision object detection
- C.Computer Vision Read
- D.Computer Vision optical character recognition (OCR)

Answer: B**Explanation:**

Custom Vision object detection is a correct answer.

CertyIQ**Question: 220**

HOTSPOT

-

Select the answer that correctly completes the sentence.

Answer Area

A traffic monitoring system that collects vehicle registration numbers from CCTV footage is an example of

▼ in the Computer Vision service.

- image classification
- object detection
- spatial Analysis
- text extraction

Answer:

Answer Area

A traffic monitoring system that collects vehicle registration numbers from CCTV footage is an example of

▼ in the Computer Vision service.

- image classification
- object detection
- spatial Analysis
- text extraction**

Explanation:

the answer is text extraction Since the goal is to extract the vehicle registration numbers from the CCTV footage, text extraction using OCR algorithms would be the most appropriate choice. OCR algorithms can recognize and extract text information from images, making it possible to retrieve the registration numbers from the captured video frames. This enables automated monitoring and analysis of the traffic data by extracting the relevant textual information.

Question: 221

CertyIQ

You need to build an image tagging solution for social media that tags images of your friends automatically.

Which Azure Cognitive Services service should you use?

- A.Face
- B.Form Recognizer
- C.Language
- D.Computer Vision

Answer: A

Explanation:

Face is correct.

Question: 222

CertyIQ

HOTSPOT

-

You have an app that identifies birds in images. The app performs the following tasks:

- Identifies the location of the birds in the image
- Identifies the species of the birds in the image

Which type of computer vision does each task use? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Answer Area

Locate the birds:

- Automated captioning
- Image classification
- Object detection
- Optical character recognition (OCR)

Identify the species of the birds:

- Automated captioning
- Image classification
- Object detection
- Optical character recognition (OCR)

Answer:

Answer Area

Locate the birds:

- Automated captioning
- Image classification
- Object detection
- Optical character recognition (OCR)

Identify the species of the birds:

- Automated captioning
- Image classification
- Object detection
- Optical character recognition (OCR)

Explanation:

Locate the Birds: Object detection.

Identify the Species of the birds: Image classification.

Question: 223

CertyIQ

You have a solution that reads manuscripts in different languages and categorizes the manuscripts based on topic.

Which types of natural language processing (NLP) workloads does the solution use?

- A.speech recognition and entity recognition
- B.speech recognition and language modeling
- C.translation and key phrase extraction
- D.translation and sentiment analysis

Answer: C

Explanation:

translation and key phrase extraction.

speech recognition would be required only if we were dealing with audio input.

Question: 224

CertyIQ

You have 100 instructional videos that do NOT contain any audio. Each instructional video has a script.

You need to generate a narration audio file for each video based on the script.

Which type of workload should you use?

- A.language modeling
- B.speech recognition
- C.speech synthesis
- D.translation

Answer: C

Explanation:

You're converting text to speech - so Speech service's text-to-speech option <https://learn.microsoft.com/en-us/azure/cognitive-services/speech-service/text-to-speech>

Question: 225

CertyIQ

HOTSPOT

-

Select the answer that correctly completes the sentence.

Answer Area

Natural language processing can be used to

- classify email messages as work-related or personal
- predict the number of future car rentals
- predict which website visitors will make a transaction
- stop a process in a factory when extremely high temperatures are registered

Answer:

Answer Area

Natural language processing can be used to

- classify email messages as work-related or personal
- predict the number of future car rentals
- predict which website visitors will make a transaction
- stop a process in a factory when extremely high temperatures are registered

Question: 226

CertyIQ

Which AI service can you use to extract intent from a user input such as "Call me back later"?

- A.Azure Cognitive Search
- B.Translator
- C.Language
- D.Speech

Answer: C

Explanation:

C. Language

You can use the Azure Cognitive Services Language service to extract intent from a user input like "Call me back later." This service provides natural language processing (NLP) capabilities, including intent recognition, and can be used to understand the meaning and intent behind user text input. It's commonly used for tasks like chatbots, virtual assistants, and other applications that involve processing and understanding user-generated text. The other options, Azure Cognitive Search (A), Translator (B), and Speech (D), are not specifically designed for intent extraction from user inputs.

Question: 227

CertyIQ

You are building a Language Understanding model for an e-commerce business.

You need to ensure that the model detects when utterances are outside the intended scope of the model.

What should you do?

- A.Export the model
- B.Add utterances to the None intent
- C.Create a prebuilt task entity
- D.Create a new model

Answer: B

Explanation:

B is the answer.

<https://learn.microsoft.com/en-us/azure/cognitive-services/language-service/conversational-language-understanding/concepts/none-intent> Every project in conversational language understanding includes a default None intent. The None intent is a required intent and can't be deleted or renamed. The intent is meant to categorize any utterances that do not belong to any of your other custom intents.

Question: 228

CertyIQ

HOTSPOT

-

Select the answer that correctly completes the sentence.

Answer Area

Azure Health Bot	▼
Microsoft Bot Framework	
Power Virtual Agents	

can be used to build no-code apps that use built-in natural language processing models

Answer:

Answer Area

Azure Health Bot	▼
Microsoft Bot Framework	
Power Virtual Agents	

can be used to build no-code apps that use built-in natural language processing models

Question: 229

CertyIQ

HOTSPOT

-

For each of the following statement, select Yes if the statement is true. Otherwise, select No.

NOTE: Each correct selection is worth one point.

Answer Area

Statements	Yes	No
A smart device in the home that responds to questions such as "When is my next appointment?" is an example of conversational AI.	<input type="radio"/>	<input type="radio"/>
An interactive webchat feature on a company website can be implemented by using Azure Bot Service.	<input type="radio"/>	<input type="radio"/>
Automatically generating captions for pre-recorded videos is an example of conversation AI.	<input type="radio"/>	<input type="radio"/>

Answer:

Answer Area

Statements	Yes	No
A smart device in the home that responds to questions such as "When is my next appointment?" is an example of conversational AI.	<input checked="" type="radio"/>	<input type="radio"/>
An interactive webchat feature on a company website can be implemented by using Azure Bot Service.	<input checked="" type="radio"/>	<input type="radio"/>
Automatically generating captions for pre-recorded videos is an example of conversation AI.	<input type="radio"/>	<input checked="" type="radio"/>

Explanation:

A smart device in the home that responds to questions such as "When is my next appointment?" is an example of conversational AI. --> Yes. An interactive webchat feature on a company website can be implemented by using Azure Bot Service. --> Yes. Automatically generating captions for pre-recorded videos is an example of conversation AI. --> No.

Question: 230

CertyIQ

What is an example of the Microsoft responsible AI principle of transparency?

- A.ensuring that opportunities are allocated equally to all applicants
- B.helping users understand the decisions made by an AI system
- C.ensuring that developers are accountable for the solutions they create
- D.ensuring that the privileged data of users is stored in a secure manner

Answer: B

Explanation:

B. helping users understand the decisions made by an AI system is correct.

Question: 231

CertyIQ

You plan to build a conversational AI solution that can be surfaced in Microsoft Teams, Microsoft Cortana, and Amazon Alexa.

Which service should you use?

- A.Azure Bot Service
- B.Azure Cognitive Search
- C.Speech
- D.Language service

Answer: A

Explanation:

Bots created using Azure Bot Service can be integrated with voice-based solutions such as Cortana, Alexa, or Google Assistant. Azure Bot Service provides the necessary channels and interfaces to connect bots to these services, allowing them to process and respond to voice commands. This integration enables users to interact with the bots through natural language voice commands, extending the bot's capabilities to various voice-enabled platforms.

Question: 232

CertyIQ

HOTSPOT

-

For each of the following statements, select Yes if the statement is true. Otherwise, select No.

NOTE: Each correct selection is worth one point.

Answer Area

Statements	Yes	No
An interactive webchat feature on a company website can be implemented by using Azure Bot Service.	<input type="radio"/>	<input type="radio"/>
Automatically generating captions for pre-recorded videos is an example of conversational AI	<input type="radio"/>	<input type="radio"/>
A smart device in the home that responds to questions such as “When is my next appointment?” is an example of conversational AI	<input type="radio"/>	<input type="radio"/>

Answer:

Answer Area

Statements	Yes	No
An interactive webchat feature on a company website can be implemented by using Azure Bot Service.	<input checked="" type="checkbox"/>	<input type="radio"/>
Automatically generating captions for pre-recorded videos is an example of conversational AI	<input type="radio"/>	<input checked="" type="checkbox"/>
A smart device in the home that responds to questions such as “When is my next appointment?” is an example of conversational AI	<input checked="" type="checkbox"/>	<input type="radio"/>

Explanation:

yes

no

yes

Question: 233

CertyIQ

Which Azure Cognitive Services service can be used to identify documents that contain sensitive information?

- A.Custom Vision
- B.Conversational Language Understanding
- C.Form Recognizer

Answer: C

Explanation:

Form Recognizer is a correct answer.

Question: 234

CertyIQ

HOTSPOT

-

Select the answer that correctly completes the sentence.

Answer Area

Detecting unusual temperature fluctuations for a large machine is an example of

a computer vision workload.
a knowledge mining workload.
a natural language processing (NLP) workload.
an anomaly detection workload.

Answer:

Answer Area

Detecting unusual temperature fluctuations for a large machine is an example of

- a computer vision workload.
- a knowledge mining workload.
- a natural language processing (NLP) workload.
- an anomaly detection workload.

Question: 235

CertyIQ

A smart device that responds to the question “What is the stock price of Contoso. Ltd.” is an example of which AI workload?

- A.knowledge mining
- B.natural language processing
- C.computer vision
- D.anomaly detection

Answer: B

Explanation:

A smart device that responds to the question “What is the stock price of Contoso. Ltd.” is an example of an AI workload related to natural language processing1. Natural language processing (NLP) is a branch of artificial intelligence that focuses on the interaction between computers and humans through natural language. It involves the ability of a computer program to understand, interpret, and generate human language in a valuable way. Knowledge mining is a process that involves extracting useful information from unstructured data sources such as text documents, images, and videos1. Computer vision refers to the field of computer science that focuses on enabling computers to gain high-level understanding from digital images or videos1. Anomaly detection is a technique used to identify patterns or data points that deviate significantly from the normal behavior or expected values1.

Question: 236

CertyIQ

DRAG DROP

Match the machine learning models to the appropriate descriptions.

To answer, drag the appropriate model from the column on the left to its description on the right. Each model may be used once, more than once, or not at all.

NOTE: Each correct match is worth one point.

Models

- Classification
- Clustering
- Regression

Answer Area

-
-
-

A supervised machine learning model used to predict numeric values.

A supervised machine learning model used to predict categories.

An unsupervised machine learning model used to group similar entities based on features.

Answer:**Answer Area**

- Regression
- Classification
- Clustering

A supervised machine learning model used to predict numeric values.

A supervised machine learning model used to predict categories.

An unsupervised machine learning model used to group similar entities based on features.

Question: 237**CertyIQ**

You are building a tool that will process images from retail stores and identify the products of competitors.

The solution must be trained on images provided by your company.

Which Azure AI service should you use?

- A.Form Recognizer
- B.Custom Vision
- C.Face
- D.Computer Vision

Answer: B**Explanation:**

B - Custom Vision is the correct answer, because you have to use your own images as input to train the model.

Question: 238**CertyIQ**

HOTSPOT

-

Select the answer that correctly completes the sentence.

Answer Area

Predicting how many hours of overtime a delivery person will work based on the number of orders received is an example of

	▼
classification.	
clustering.	
regression.	

Answer:

Answer Area

Predicting how many hours of overtime a delivery person will work based on the number of orders received is an example of

	▼
classification.	
clustering.	
regression.	

Explanation:

Predicting how many hours of overtime a delivery person will work based on the number of orders received is an example of a regression model. Regression is used for predicting numerical values based on input data, which in this case is the number of hours of overtime based on the number of orders.

Question: 239

CertyIQ

Predicting agricultural yields based on weather conditions and soil quality measurements is an example of which type of machine learning model?

- A.classification
- B.regression
- C.clustering

Answer: B

Explanation:

regression is a correct answer.

Question: 240

CertyIQ

You need to identify street names based on street signs in photographs.

Which type of computer vision should you use?

- A.object detection

B.optical character recognition (OCR)

C.image classification

D.facial recognition

Answer: B

Explanation:

B-OCR, because you are extracting test from images by identifying the characters.

CertyIQ

Question: 241

DRAG DROP

Match the types of computer vision workloads to the appropriate scenarios.

To answer, drag the appropriate workload type from the column on the left to its scenario on the right. Each workload type may be used once, more than once, or not at all.

NOTE: Each correct selection is worth one point.

Workload Types	Answer Area
Image classification	
Object detection	
Optical character recognition (OCR)	

Generate captions for images.

Extract movie title names from movie poster images.

Locate vehicles in images.

Answer:

Answer Area	
Object detection	Generate captions for images.
Optical character recognition (OCR)	Extract movie title names from movie poster images.
Object detection	Locate vehicles in images.

Explanation:

Object Detection

(OCR)

Object detection

CertyIQ

Question: 242

You have a bot that identifies the brand names of products in images of supermarket shelves.

Which service does the bot use?

- A.AI enrichment for Azure Search capabilities
- B.Computer Vision Image Analysis capabilities
- C.Custom Vision Image Classification capabilities
- D.Language Understanding capabilities

Answer: B

Explanation:

B. The question does n t mention "Custom" brand names and The Computer Vision Image Analysis service is already trained to recognize a wide variety of visual features from images, including specific brands or objects.

Question: 243

CertyIQ

You are developing a chatbot solution in Azure.

Which service should you use to determine a user's intent?

- A.Translator
- B.Language
- C.Azure Cognitive Search
- D.Speech

Answer: B

Explanation:

it is Language Understanding (LUIS)

Thank you

Thank you for being so interested in the premium exam material.

I'm glad to hear that you found it informative and helpful.

If you have any feedback or thoughts on the bumps, I would love to hear them.
Your insights can help me improve our writing and better understand our readers.

Best of Luck

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