QUESTION 55
Hotspot Question
For each of the following statements, select Yes if the statement is true. Otherwise, select No.

Statement	Yes	No
According to the Transparency principle, AI systems should treat all people fairly.	○	○
According to the Reliability & Safety principle, AI systems should be secure and respect privacy.	○	○
According to the Accountability principle, people should be accountable for AI systems.	○	○

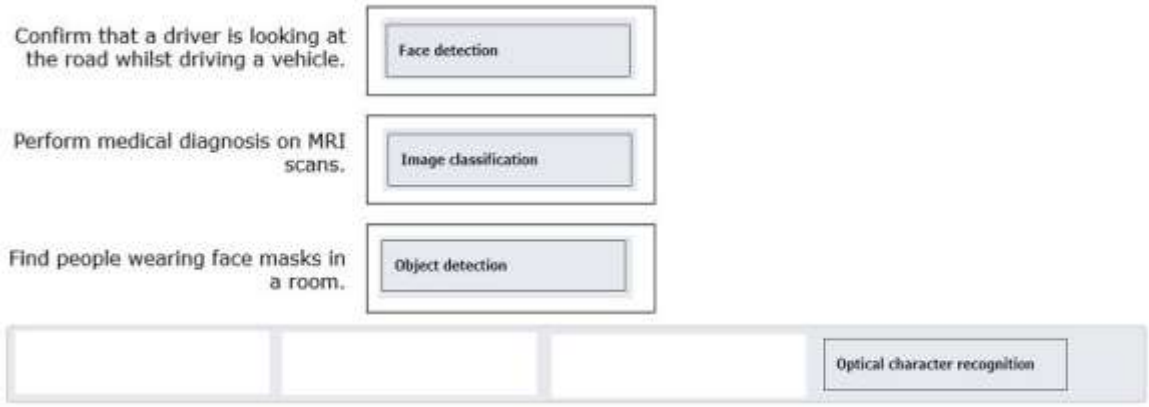
Answer:

Statement	Yes	No
According to the Transparency principle, AI systems should treat all people fairly.	○	○
According to the Reliability & Safety principle, AI systems should be secure and respect privacy.	○	○
According to the Accountability principle, people should be accountable for AI systems.	○	○

Explanation:
The Transparency principle does not deal with fairness. It indicates that AI systems should be understandable. System users should have a clear understanding of how an AI system operates, what data it utilizes, what the system's capabilities and limitations are, and so on. The guiding principle concerned with AI systems treating all people fairly is Fairness.
The Reliability & Safety principle indicates that AI systems should perform reliably and safely. This requires proper testing and verification of an AI system's functionality to ensure that it works as expected and to eliminate potential risk to human life. The guiding principle concerned with AI systems being secure and respecting privacy is Privacy & Security.
People should be accountable for AI systems according to the Accountability principle. AI systems are built by people (designers and developers) and they should be responsible for what AI systems do. It requires people to follow governance and organizational policies to ensure that the solution meets clearly defined ethical and legal standards.

QUESTION 56
Drag and Drop Question
Match the computer vision type to the scenario. To answer, drag the appropriate type to each scenario. A type may be used once, more than once, or not at all.

Answer:



Explanation:
Face detection can be used to monitor a driver's face. The angle of the head can be determined and used to tell if the driver is looking at the road ahead, or looking down at a mobile device, or if the driver is showing signs of tiredness.
Image classification can be used to evaluate scanned images from MRI machines to classify the images against trained images of known medical conditions.
Object detection can be used to detect objects in an image. You can train Computer Vision to detect face masks. Face detection does not include the ability to recognize that a face is covered with a mask. Masks may actually prevent faces from being recognized.
Optical character recognition (OCR) extracts text from an image. OCR can recognize individual shapes as letters, numerals, punctuation, and other elements of text.

QUESTION 57
Hotspot Question
For each of the following statements, select Yes if the statement is true. Otherwise, select No.

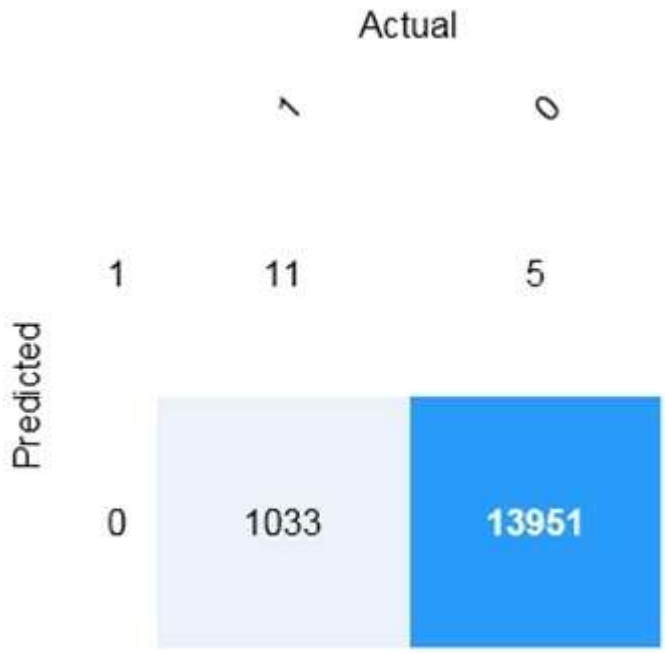
Statement	Yes	No
A bot created with the Azure Bot Framework SDK can be integrated with Language Understanding (LUIS).	○	○
A bot created with the Azure Bot Framework SDK can be integrated with QnA Maker.	○	○
A bot created with the Azure Bot Framework SDK can be integrated with Power Virtual Agents.	○	○

Answer:

Statement	Yes	No
A bot created with the Azure Bot Framework SDK can be integrated with Language Understanding (LUIS).	○	○
A bot created with the Azure Bot Framework SDK can be integrated with QnA Maker.	○	○
A bot created with the Azure Bot Framework SDK can be integrated with Power Virtual Agents.	○	○

Explanation:
A bot created with the Azure Bot Framework SDK can be integrated with LUIS. You can add LUIS to your bot when you create the bot, or add LUIS later. You use the Dispatch tool to route messages from the bot to LUIS.
A bot created with the Azure Bot Framework SDK can be integrated with QnA Maker knowledge bases. You use the Dispatch tool to route messages from the bot to QnA Maker. Your bot can choose which has the best response for the user.
A bot created with the Azure Bot Framework SDK can be integrated with bots created using Power Virtual Agents. You use the Dispatch tool to configure your bot to work with a Power Virtual Agent bot.

QUESTION 58
Hotspot Question
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.



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.

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
Actual False	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 59
Hotspot Question
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
Forecasting housing prices based on historical data is an example of anomaly detection.	○	○
Identifying suspicious sign-ins by looking for deviations from usual patterns is an example of anomaly detection.	○	○
Predicting whether a patient will develop diabetes based on the patient's medical history is an example of anomaly detection.	○	○

Answer:

Answer Area

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

Explanation:
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 60
Hotspot Question
To complete the sentence, select the appropriate option in the answer 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:
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. At Microsoft, we are continuing to research privacy and security breakthroughs (see next unit) and invest in robust compliance processes to ensure that data collected and used by our AI systems is handled responsibly.
Reference:
https://docs.microsoft.com/en-us/learn/modules/responsible-ai-principles/4-guiding-principles

QUESTION 61
Drag and Drop Question
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.

Workloads Types	Answer Area	
Anomaly detection	Workload Type	An automated chat to answer questions about refunds and exchange
Computer vision	Workload Type	Determining whether a photo contains a person
Conversational AI	Workload Type	Determining whether a review is positive or negative
Knowledge mining		
Natural language processing		

Answer:

Workloads Types	Answer Area	
Anomaly detection	Conversational AI	An automated chat to answer questions about refunds and exchange
	Computer vision	Determining whether a photo contains a person
	Natural language processing	Determining whether a review is positive or negative
Knowledge mining		

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

QUESTION 62
Drag and Drop Question
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.

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.
Inclusiveness	Fairness	Implementing processes to ensure that decisions made by AI systems can be overridden by humans.
	Privacy and security	Provide consumers with information and controls over the collection, use, and storage of their data.

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: Fairness
Fairness: 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 with similar symptoms, financial circumstances, or professional qualifications.
We believe that mitigating bias starts with people understanding the implications and limitations of AI predictions and recommendations. Ultimately, people should supplement AI decisions with sound human judgment and be held accountable for consequential decisions that affect others.
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 63
Hotspot Question
To complete the sentence, select the appropriate option in the answer area.

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

- inclusiveness
- accountability
- reliability and safety
- fairness

Answer:

When developing an AI system for self-driving cars, the Microsoft [reliability and safety] principle for responsible AI should be applied to ensure consistent operation of the system during unexpected circumstances.

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 64
Drag and Drop Question
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	Answer Area	
Anomaly detection	Workload Type	Identify handwritten letters.
Computer vision	Workload Type	Predict the sentiment of a social media post.
Machine Learning (Regression)	Workload Type	Identify a fraudulent credit card payment.
Natural language processing	Workload Type	Predict next month's toy sales.

Answer:

Workload Types	Answer Area	
	Computer vision	Identify handwritten letters.
	Natural language processing	Predict the sentiment of a social media post.
	Anomaly detection	Identify a fraudulent credit card payment.
	Machine Learning (Regression)	Predict next month's toy sales.

Explanation:
https://docs.microsoft.com/en-us/learn/paths/get-started-with-artificial-intelligence-on-azure/

QUESTION 65
Hotspot Question
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 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:
https://docs.microsoft.com/en-us/azure/cognitive-services/computer-vision/concept-object-detection

QUESTION 66
Hotspot Question
To complete the sentence, select the appropriate option in the answer area.

Answer Area

_____ is used to generate additional features.

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

Answer:

Answer Area

Feature engineering is used to generate additional features.

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