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

NOTE: Each correct selection is worth one point.

|  |  |
| --- | --- |
| You can use Azure AI Language Service's question answering to query an Azure SQL database. | No |
| You should use Azure AI Language Service's question answering when you want a knowledge base to provide the same answer to different users who submit similar questions. | Yes |
| Azure AI Language Service's question answering can determine the intent of a user utterance. | No |

1. 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 \_\_\_\_\_\_\_\_.

1. analysis.
2. **detection.**
3. recognition.
4. Select the answer that correctly completes the sentence.

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

1. Azure AI Vision
2. **Azure AI Custom Vision**
3. Azure AI Document Intelligence
4. 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

|  |  |
| --- | --- |
| Object detection can identify the location of a damaged product in an image. | Yes |
| Object detection can identify multiple instances of a damaged product in an image. | Yes |
| Object detection can identify multiple types of damaged products in an image. | No |

1. Which Azure AI Vision feature can you use to generate automatic captions for digital photographs?
2. Identify the areas of interest.
3. **Describe the images.**
4. Detect objects.
5. Recognize text.
6. 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?

1. optical character recognition (OCR)
2. image classification
3. face detection
4. **object detection**
5. In which two scenarios can you use the Azure AI Document Intelligence service (formerly Form Recognizer)? Each correct answer presents a complete solution.

NOTE: Each correct selection is worth one point.

1. Find images of products in a catalog.
2. Translate a form from French to English.
3. **Extract the invoice number from an invoice.**
4. **Identify the retailer from a receipt.**
5. You have an app that identifies the coordinates of a product in an image of a supermarket shelf.

Which service does the app use?

1. **Azure AI Custom Vision object detection**
2. Azure AI Vision Read
3. Azure AI Vision optical character recognition (OCR)
4. Azure AI Custom Vision classification
5. 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?"

The options provided are:

1. fairness
2. privacy and security
3. **inclusiveness**
4. accountability
5. What are three Microsoft guiding principles for responsible AI ?
6. **reliability and safety**
7. **inclusiveness**
8. decisiveness
9. **fairness**
10. opinionatedness
11. knowledgeability
12. Counting the number of animals in an area based on a video feed is an example of \_\_\_\_\_\_.
13. forecasting.
14. **computer vision.**
15. knowledge mining.
16. anomaly detection.
17. According to Microsoft's \_\_\_\_\_\_ principle of responsible AI, AI systems should NOT reflect biases present in the data sets that are used to train the systems.
18. accountability
19. **fairness**
20. inclusiveness
21. transparency
22. 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 match is worth one point.

|  |
| --- |
| **Workload Types** |
| Document intelligence |
| Computer vision |
| Knowledge mining |
| Natural language processing |

|  |  |
| --- | --- |
| A. An automated chatbot to answer questions about refunds and exchanges | Natural language processing |
| B. Determining whether a photo contains a person | Computer vision |
| C. Determining whether a review is positive or negative | Document intelligence |

1. which Azure AI service can be used to extract intent from a user input such as "Call me back later". The options provided are:
   1. Azure AI Search
   2. **Azure AI Language**
   3. Azure AI Translator
   4. Azure AI Speech
2. You need to predict the population size of a specific species of animal in an area. Which Azure Machine Learning type should you use?
   1. clustering
   2. classification
   3. **regression**
3. Which type of machine learning should you use to identify groups of people who have similar purchasing habits?
   1. **clustering**
   2. classification
   3. regression
4. For each of the following statements, select Yes if the statement is true. Otherwise, select No.

NOTE: Each correct selection is worth one point.

|  |  |
| --- | --- |
| You train a regression model by using unlabelled data. | No |
| The classification technique is used to predict sequential numerical values over time. | No |
| Grouping items by their common characteristics is an example of clustering. | Yes |

1. 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

|  |  |
| --- | --- |
| Azure Machine Learning designer provides a drag-and-drop visual canvas to build, test, and deploy machine learning models. | Yes |
| Azure Machine Learning designer enables you to save your progress as a pipeline draft. | Yes |
| Azure Machine Learning designer enables you to include custom JavaScript functions. | No |

1. A banking system that predicts whether a loan will be repaid is an example of the \_\_\_\_ type of machine learning.
2. **classification**
3. clustering
4. regression
5. For a machine learning process, how should you split data for training and evaluation?
   1. Use features for training and labels for evaluation.
   2. Randomly split the data into columns for training and columns for evaluation.
   3. **Randomly split the data into rows for training and rows for evaluation.**
   4. Use labels for training and features for evaluation.
6. 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.

* 1. the model name
  2. **the authentication key**
  3. **the REST endpoint**
  4. the training endpoint

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

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

A table with text on it

Description automatically generated

NOTE: Each correct selection is worth one point.

1. First Name
2. Income Range
3. Last Name
4. **Education Level**
5. **Age**
6. For each of the following statements, select Yes if the statement is true. Otherwise, select No.

NOTE: Each correct selection is worth one point.

Statements

|  |  |
| --- | --- |
| The Azure OpenAI GPT-3.5 Turbo model can transcribe speech to text. | No |
| The Azure OpenAI DALL-E model generates images based on text prompts. | Yes |
| The Azure OpenAI embeddings model can convert text into numerical vectors based on text similarities. | Yes |

1. What is an example of a Microsoft responsible AI principle?
   1. **AI systems should be secure and respect privacy.**
   2. AI systems should make personal details accessible.
   3. AI systems should be in the public domain.
   4. AI systems should protect the interests of developers
2. 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?

1. **Enable Explain best model.**
2. Set Validation type to Auto.
3. Set Max concurrent iterations to 0.
4. Set Primary metric to accuracy.
5. What should you do to ensure that an Azure OpenAI model generates accurate responses that include recent events?
   1. Add grounding data.
   2. **Add training data.**
   3. Modify the system message.
   4. Add few-shot learning.
6. For each of the following statements, select Yes if the statement is true. Otherwise, select No. NOTE: Each correct selection is worth one point.

|  |  |
| --- | --- |
| Monitoring online service reviews for swearing or profanity is an example of natural language processing. | Yes |
| Identifying brand logos in an image is an example of natural language processing. | No |
| Monitoring public news sites for negative mentions of a product is an example of natural language processing. | Yes |

1. You plan to use Azure AI Services to develop a voice-controlled personal assistant app.Match the Azure AI 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.

|  |
| --- |
| Services |
| Azure AI Speech |
| Azure AI Language service |
| Azure AI Translator Text |

|  |  |
| --- | --- |
| Convert a user's speech to text. | Azure AI Speech |
| Identify a user's intent. | Azure AI Language service |
| Provide a spoken response to the user. | Azure AI Speech |

1. 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?

* 1. **chatbot**
  2. natural language processing (NLP)
  3. computer vision
  4. machine learning

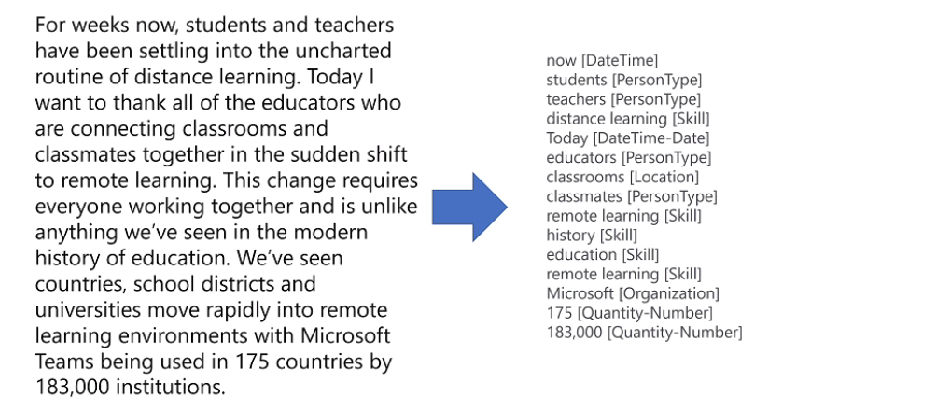
1. You have a website that includes customer reviews.

You need to store the reviews in English and present the reviews to users in their respective language based on each user's geographical location.

Which type of natural language processing workload should you use?

1. translation
2. **key phrase extraction**
3. speech recognition
4. language modelling
5. You use natural language processing to process text from a Microsoft news story.

You receive the output shown in the following exhibit.



Which type of natural languages processing was performed?

A. **entity recognition**

B. key phrase extraction

C. sentiment analysis

D. translation

1. You have the process shown in the following exhibit.

A screenshot of a chat

Description automatically generated

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

1. You have a chatbot that answers technical questions by using the Azure OpenAI GPT-3.5 large language model (LLM).

Which two statements accurately describe the chatbot? Each correct answer presents a complete solution.

NOTE: Each correct answer is worth one point.

**A. Grounding data can be used to constrain the output of the chatbot.**

B. The chatbot will always provide accurate data.

C. The chatbot is suitable for performing medical diagnosis.

**D. The chatbot might respond with inaccurate data.**

1. You need to generate cartoons for use in a brochure. Each cartoon will be based on a text description.

Which Azure OpenAI model should you use?

A. GPT-4

B. Whisper

**C. DALL-E**

D. GPT-3.5

1. What are three stages in a transformer model? Each correct answer presents a complete solution.

NOTE: Each correct answer is worth one point.

A. **next token prediction**

B. anonymization

C. **embedding calculation**

D. object detection

**E. tokenization**

1. \_\_\_\_\_ extension for Microsoft Visual Studio Code uses the OpenAI Codex model."

The options in the dropdown menu are:

1. **The GitHub Copilot**
2. The GitHub source control
3. The IntelliSense
4. The Microsoft 365 Copilot
5. Match the Azure OpenAI large language model (LLM) process to the appropriate task.

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

NOTE: Each correct match is worth one point

|  |
| --- |
| Processes: |
| Classifying |
| Generating |
| Summarizing |
| Translating |

Ans:

* Classifying: Detect the genre of a work of fiction. (Classification is used to categorize or label text.)
* Generating: Create advertising slogans from a product description. (Generation is used to create new text based on input.)
* Summarizing: Create a list of bullet points based on text input. (Summarization condenses text into shorter forms.)

1. What can be used to complete a paragraph based on a sentence provided by a user?

The options are:

**A. Azure OpenAI**

B. Azure Machine Learning

C. Azure AI Vision

D. Azure AI Language

1. What should you do to reduce the number of false positives produced by a machine learning classification model?

A. **Modify the threshold value in favor of false negatives.**B. Include test data in the training data.  
C. Increase the number of training iterations.  
D. Modify the threshold value in favor of false positives.

1. 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:**

* Evaluate the model against the original dataset.
* 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.

Ans:

1. Ingest and prepare a dataset.
2. Split the data randomly into training data and validation data
3. Train the model.
4. Evaluate the model against the validation dataset.
5. You have the following dataset.

A close-up of a post code

Description automatically generated

you plan to use the dataset to train a model that will predict the house price category of houses.

What are Household Income and House Price Category? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

1. Household income

* **A feature**
* A label

1. House price category

* A feature
* **A label**

1. 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.

A table with numbers and text

Description automatically generated

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

NOTE: Each correct selection is worth one point.

|  |  |
| --- | --- |
| Statements |  |
| Mass (kg) is feature | Yes |
| Quality test is label | Yes |
| Temperature (c) is label | No |

1. 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 |  |
| Organizing documents into groups based on different usage statistics is an example of clustering. | Yes |
| Grouping similar patients based on symptoms and diagnostic test results is an example of clustering. | Yes |
| Predicting whether a person will develop mild, moderate, or severe allergy symptoms based on pollen count is an example of clustering. | No |

1. Select the answer that correctly completes the sentence.

Using Recency, Frequency, and Monetary (RFM) values to identify segments of a customer base with similar characteristics is an example of \_\_\_\_\_\_\_\_\_\_.

* + - clustering.
    - regression.
    - **classification.**
    - regularization.

1. 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?
2. the trip ID of individual taxi journeys
3. **the trip distance of individual taxi journeys**
4. the number of taxi journeys in the dataset
5. the fare of individual taxi journeys
6. For each of the following statements, select Yes if the statement is true. Otherwise, select No.

NOTE: Each correct selection is worth one point.

Statements

|  |  |
| --- | --- |
| Automated machine learning provides you with the ability to include custom Python scripts in a training pipeline. | Yes |
| Automated machine learning implements machine learning solutions without the need for programming experience. | Yes |
| Automated machine learning provides you with the ability to visually connect datasets and modules on an interactive canvas. | Yes |

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

A. clustering

B. classification

**C. regression**

* 1. 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**

* 1. 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.

* 1. generating live captions for a news broadcast
  2. **an AI character in a computer game that speaks audibly to a player**
  3. extracting key phrases from the audio recording of a meeting
  4. **an automated voice that reads back a credit card number entered into a telephone by using a numeric keypad**
  5. 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 Azure AI Language Service's question answering? Each correct answer presents a complete solution.

NOTE: Each correct selection is worth one point.

* 1. **Import chit-chat content from a predefined data source.**
  2. Use Azure Machine Learning Automated ML to train a model based on a file that contains question and answer pairs.
  3. Connect the bot to the Cortana channel and ask questions by using Cortana.
  4. **Manually enter the questions and answers.**
  5. **Generate the questions and answers from an existing webpage.**
  6. 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 |  |
| - Chatbots can support voice input. | Yes |
| - A separate chatbot is required for each communication channel. | No |
| - Chatbots manage conversation flows by using a combination of natural language and constrained option responses. | Yes |

* 1. You have a custom question answering solution.

You create a bot that uses the knowledge base to respond to customer requests.

What tasks can the bot perform without requiring you to add additional skills?

A**. Answer questions from multiple users simultaneously.**

B. Provide customers with return materials authorization (RMA) numbers.

C. Register customer purchases.

D. Register customer complaints.

* 1. 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 |  |
| Chatbots can only be built by using custom code. | No |
| The Azure AI Bot Service provides services that can be used to host conversational bots. | Yes |
| Bots built by using the Azure AI Bot Service can communicate with Microsoft Teams users | Yes |

.

* 1. In which scenario should you use key phrase extraction?

A. identifying whether reviews of a restaurant are positive or negative

**B. identifying which documents provide information about the same topics**

C. translating a set of documents from English to German

D. generating captions for a video based on the audio track

* 1. What can be used to build an AI model that will create short articles for a website?

A. Azure OpenAI Studio

B. GitHub Copilot

C. Document Intelligence Studio

**D. ChatGPT**

* 1. Which two actions can you perform by using the Azure OpenAI DALL-E model? Each correct answer presents a complete solution.

NOTE: Each correct answer is worth one point.

**A. Create images.**

B. Generate captions for images.

C. Detect objects in images.

D. Use optical character recognition (OCR).

**E. Modify images.**

* 1. Which parameter should you configure to produce more verbose responses from a chat solution that uses the Azure OpenAI GPT-3.5 model?

A. Stop sequence

B. Temperature

C. Presence penalty

D. **Max response**

* 1. 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 |  |
| A transformer model architecture uses self-attention. | Yes |
| A transformer model architecture includes an encoder block and a decoder block. | Yes |
| A transformer model architecture includes an encryption block or a decryption block. | No |

* 1. You need to generate images based on user prompts.

Which Azure OpenAI model should you use?

**A. DALL-E**

B. GPT-3

C. Whisper

D. GPT-4

* 1. Which parameter should you configure to produce a more diverse range of tokens in the responses from a chat solution that uses the Azure OpenAI GPT-3.5 model?

A. Stop sequence

**B. Presence penalty**

C. Max response

D. Past messages included

* 1. 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 |  |
| You can fine-tune some Azure OpenAI models by using your own data. | Yes |
| Pretrained generative AI models are a component of Azure OpenAI. | Yes |
| To build a solution that complies with Microsoft responsible AI principles, you must build and train your own model. | No |

Match the computer vision service to the appropriate AI workload.

* 1. 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

Azure AI Custom Vision

Azure AI Document Intelligence

Azure AI Vision

|  |  |
| --- | --- |
| Extract information from scanned forms and invoices. | Azure AI Document Intelligence |
| Analyze images and video, and extract descriptions, tags, objects, and text. | Azure AI Vision |
| Train custom image classification and object detection models by using your own images. | Azure AI Custom Vision |

* 1. 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. natural language processing

**B. computer vision**

C. knowledge mining

D. generative AI

* 1. You are building an AI system.

Which task should you include to help the service meet the Microsoft transparency principle for responsible AI?

A. Enable autoscaling to ensure that a service scales based on demand.

B. Ensure that all visuals have an associated text that can be read by a screen reader.

**C. Ensure that a training dataset is representative of the population.**

D. Provide documentation to help developers debug code.

* 1. 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. Extract key phrases.

B. Translate text between languages.

C. Predict stock prices.

**D. Detect the color scheme in an image.**

**E. Detect brands in an image.**

* 1. Select the answer that correctly completes the sentence.

Correctly handling unusual or missing values is an example of the application of the \_\_\_\_\_\_\_\_\_ principle for responsible AI.

* inclusiveness
* privacy and security
* **reliability and safety**
* transparency
  1. 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. assembly line machinery that autonomously inserts headlamps into cars

**C. a website that uses a knowledge base to interactively respond to users’ questions**

**D. a smart device in the home that responds to questions such as, “What will the weather be like today?**

* 1. 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.

* 1. 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. natural language processing**

B. regression

C. anomaly detection

D. computer vision

* 1. You are building an AI-based app.

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

Which two practices 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. Prevent the disclosure of the use of AI-based algorithms for automated decision making.

C**. Establish a risk governance committee that includes members of the legal team, members of the risk management team, and a privacy officer.**

**D. Implement a process of AI model validation as part of the software review process.**

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

NOTE: Each correct selection is worth one point.

|  |  |
| --- | --- |
| Statements |  |
| For a regression model, labels must be numeric. | Yes |
| For a clustering model, labels must be provided. | No |
| For a classification model, labels must be numeric. | No |

* 1. Select the answer that correctly completes the sentence.

Answer Area

\_\_\_\_\_\_ can be used to create a knowledge base from frequently asked questions (FAQ).

**- Azure AI Bot Service**

- Azure AI Language

- Azure AI Document Intelligence

- The Microsoft Bot Framework SDK

* 1. You need to analyze images of vehicles on a highway and measure the distance between the vehicles.

Which type of computer vision model should you use?

A. facial recognition

**B. object detection**

C. optical character recognition (OCR)

D. image classification

* 1. You plan to apply Azure AI Language service API features to a technical support ticketing system.

Match the Azure AI Language service API features to the appropriate natural language processing scenarios.

NOTE: Each correct match is worth one point.

**API Features**

Entity recognition

Key phrase extraction

Language detection

Sentiment analysis

Speech recognition and speech synthesis

Translation

|  |  |
| --- | --- |
| **Scenarios:** | **API Features** |
| Understand how upset a customer is based on the text contained in the support ticket. | **Sentiment analysis** |
| Summarize important information from the support ticket. | **Key phrase extraction** |
| Extract key dates from the support ticket. | **Entity recognition** |

* 1. What are two tasks that can be performed by using the Azure AI 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. Translate the text in an image between languages.

**C. Recognize handwritten text.**

D. Detect faces in an image.

* 1. 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. Azure AI Custom Vision object detection**

B. Azure AI Vision Image Analysis

C. Azure AI Custom Vision classification

D. Azure AI Vision Spatial Analysis

* 1. 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 match is worth one point.

Workload Types

- Image classification

- Object detection

- Optical character recognition (OCR)

|  |  |
| --- | --- |
| Generate captions for images. | **Image classification** |
| Extract movie title names from movie poster images. | **Optical character recognition (OCR)** |
| Locate vehicles in images. | **Object detection** |

* 1. 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. object detection

**B. optical character recognition (OCR)**

C. facial recognition

D. image classification

* 1. Select the answer that correctly completes the sentence.

Answer Area

\_\_\_\_\_\_ extracts text from handwritten documents.

- Object detection

- Facial recognition

- Image classification

**- Optical character recognition (OCR)**

* 1. 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. Azure AI Custom Vision**

B. Azure AI Document Intelligence

C. Face

D. Azure AI Vision

* 1. Select the answer that correctly completes the sentence.

Answer Area

\_\_\_\_\_\_ is used to identify and locate multiple types of items in one image.

- Image classification

- Image description

**- Object detection**

- Optical character recognition (OCR)

* 1. Which statement is an example of a Microsoft responsible AI principle?

A. AI systems must protect the interests of the company.

**B. AI systems must be understandable.**

C. AI systems must keep personal details public.

D. AI systems must use only publicly available data.

* 1. You have an Azure Machine Learning model that uses clinical data to predict whether a patient has a disease. You clean and transform the clinical data. You need to ensure that the accuracy of the model can be verified. What should you do next?

A. Validate the model by using the clinical data.

**B. Split the clinical data into two datasets.**

C. Train the model by using automated machine learning (automated ML).

D. Train the model by using the clinical data.

* 1. For each of the following statements, select Yes if the statement is true. Otherwise, select No.  
     NOTE: Each correct selection is worth one point.

|  |  |
| --- | --- |
| Named entity recognition can be used to retrieve dates and times in a text string. | Yes |
| Key phrase extraction can be used to retrieve important phrases in a text string. | Yes |
| Key phrase extraction can be used to retrieve all the city names in a text string. | No |

* 1. 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 a transcript of a telephone call or meeting**  
D. creating an automated public address system for a train station

* 1. 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.

* 1. Match the types of natural language processing workloads to the appropriate scenarios.

Workload Types:

* Entity recognition
* Key phrase extraction
* Language modeling

Scenarios:

Extracts persons, locations, and organizations

Evaluates text along a positive-negative scale

Converts text to a different language

Ans:

Correct Matches:

|  |  |
| --- | --- |
| Entity recognition | Extracts persons, locations, and organizations |
| Key phrase extraction | Evaluates text along a positive negative scale |
| Language modeling | Converts text to a different language |

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

While presenting at a conference, your session is transcribed into closed captions for the audience. This is an example of **……………….**

* sentiment analysis
* **speech recognition**
* speech synthesis
* translation
  1. Match the services to the appropriate descriptions.

Services:

* Azure Storage
* Azure AI Bot Service
* Azure AI Language Service
* Azure AI Speech

**Answer Area:**

* + Enables the use of natural language to query a knowledge base.- **Azure AI Language Service**
  + Enables the real-time transcription of speech-to-text.-  **Azure AI Speech**
  1. Match the AI solution to the appropriate task.

Solutions:

* Computer vision
* Data mining
* Generative AI
* Text analytics

|  |  |
| --- | --- |
| Generate a caption from a given image. | Computer vision |
| Generate an image from a given caption. | Generative AI |
| Generate a 200-word summary from a 2,000-word article. | Text analytics |

* 1. Which format should you use to send requests to a REST API endpoint for Azure OpenAI?

**A. JSON**  
B. XML  
C. YAML  
D. CSV

* 1. You can modify the **temperature** parameter to produce more deterministic responses from a chat solution that uses the Azure OpenAI GPT-3.5 model.

Answer Area:

* frequency penalty
* max response
* stop sequence
* **temperature**
  1. Which OpenAI model does GitHub Copilot use to make suggestions for client-side JavaScript?

**A. Codex**  
B. DALL-E  
C. GPT-4  
D. GPT-3

* 1. You need to predict the sea level in meters for the next 10 years. Which type of machine learning should you use?

A. clustering  
B. classification  
**C. regression**

* 1. 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

* 1. Match the tool to the Azure Machine Learning task.

Tools:

* Automated machine learning (automated ML)
* The Azure portal
* Machine Learning designer

|  |  |
| --- | --- |
| Create a Machine Learning workspace | The Azure portal |
| Use a drag-and-drop interface used to train and deploy models | Machine Learning designer |
| Use a wizard to select configurations for a machine learning run | Automated machine learning (automated ML) |

* 1. When training a model, why should you split the data rows into separate subsets?

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

* 1. Which two components can you drag onto a canvas in Azure Machine Learning designer?

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

* 1. You need to build an app that will create descriptions of images. Which service should you use?

A. conversational language understanding (CLU)  
**B. Azure AI Vision**  
C. Azure Machine Learning  
D. Azure OpenAI Service

* 1. 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

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

|  |  |
| --- | --- |
| The Azure AI Custom Vision service can be used to detect objects in an image. | Yes |
| The Azure AI Custom Vision service requires that you provide your own data to train the model. | Yes |
| The Azure AI Custom Vision service can be used to analyze video files. | No |

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

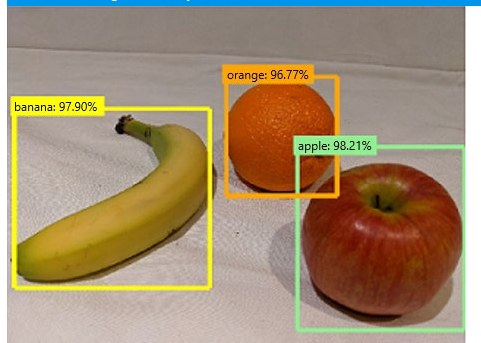
A. Azure AI Face  
**B. Azure AI Document Intelligence**  
C. Azure AI Language  
D. Azure AI Custom Vision

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

**Sentence:**  
Returning a bounding box that indicates the location of a vehicle in an image is an example of \_.

**Answer Area Options:**

* image classification
* **object detection**
* optical character recognition (OCR)
* facial detection
  1. You send an image to an Azure AI Vision API and receive back the annotated image shown in the following exhibit. Which type of computer vision was used?



**A. object detection**

B. face detection

C. optical character recognition (OCR)

D. image classification

* 1. Select the answer that correctly completes the sentence.

**Sentence:**  
A historian can use …………… to digitize newspaper articles.

**Answer Area Options:**

* facial analysis
* image classification
* object detection
* **optical character recognition (OCR)**
  1. 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. privacy and security  
C. fairness  
D. inclusiveness

* 1. 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. transparency  
**C. fairness**  
D. reliability and safety

* 1. Select the answer that correctly completes the sentence.

**Sentence:**  
The interactive answering of questions entered by a user as part of an application is an example of \_...............................

**Answer Area Options:**

* anomaly detection
* computer vision
* **natural language processing**
* forecasting
  1. You need to identify street names based on street signs in photographs. Which type of computer vision should you use?

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

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

**Statements:**

|  |  |
| --- | --- |
| A bot that responds to queries by internal users is an example of a natural language processing workload. | Yes |
| A mobile application that displays images relating to an entered search term is an example of a natural language processing workload. | No |
| A web form used to submit a request to reset a password is an example of a natural language processing workload. | No |

* 1. Providing contextual information to improve the responses quality of a generative AI solution is an example of which prompt engineering technique?

**A. grounding data**  
B. providing examples  
C. system messages  
D. fine-tuning

* 1. You have a bot that identifies the brand names of products in images of supermarket shelves. Which service does the bot use?

**A. Azure AI Custom Vision Image Classification capabilities**  
B. Azure AI Language Understanding capabilities  
C. AI enrichment for Azure Search capabilities  
D. Azure AI Computer Vision Image Analysis capabilities

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

**Statements:**

|  |  |
| --- | --- |
| Providing an explanation of the outcome of a credit loan application is an example of the Microsoft transparency principle for responsible AI. | Yes |
| A triage bot that prioritizes insurance claims based on injuries is an example of the Microsoft reliability and safety principle for responsible AI. | Yes |
| An AI solution that is offered at different prices for different sales territories is an example of the Microsoft inclusiveness principle for responsible AI. | No |

* 1. Select the answer that correctly completes the sentence.

**Sentence:**  
Asking a chatbot whether it will rain and being provided with a weather report is an example of \_.

**Answer Area Options:**

* anomaly detection
* computer vision
* **natural language processing**
* prediction and forecasting
  1. 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.

A screenshot of a computer

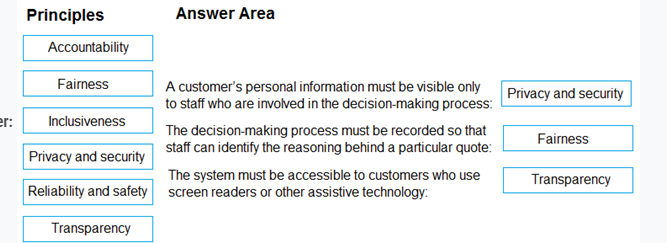
Description automatically generated

* 1. 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



* 1. Select the answer that correctly completes the sentence.

Implementing filters to block harmful content as part of a chat solution that uses generative AI is an example of the…………………….. Microsoft responsible AI principle.

* accountability
* fairness
* **privacy and security**
* transparency
  1. For each of the following statements, select Yes if the statement is true. Otherwise, select No.  
     NOTE: Each correct selection is worth one point.

|  |  |
| --- | --- |
| Statements |  |
| The Azure AI Language service can be used to extract key phrases from documents. | Yes |
| The Azure AI Language service can be used to generate press releases based on user prompts. | Yes |
| The Azure AI Language service can be used to build a social media feed analyzer to detect sentiment. | Yes |

* 1. Which type of natural language processing (NLP) entity is used to identify a phone number?  
     A. machine-learned  
     B. list  
     **C. regular expression**  
     D. Pattern.any"
  2. Which Azure service can use the prebuilt receipt model in Azure AI Document Intelligence?  
     **A. Azure AI Vision**  
     B. Azure AI Custom Vision  
     C. Azure Machine Learning  
     D. Azure AI Services"
  3. Which two resources can you use to analyze code and generate explanations of code function and code comments? Each correct answer presents a complete solution.  
     NOTE: Each correct answer is worth one point.  
     **A. the Azure OpenAI GPT-4 model**  
     B. the Azure OpenAI DALL-E model  
     C. the Azure OpenAI Whisper model  
     **D. the GitHub Copilot service**
  4. Which type of Azure AI workload should you use to create illustrations based on the text of an article?  
     **A. generative AI**  
     B. natural language processing  
     C. computer vision  
     D. Azure AI Document Intelligence
  5. You have a dataset that contains sales data and has defined labels for types of customers.  
     You need to create a model to categorize customer types based on sales data.  
     Which type of machine learning should you use?  
     **A. Classification**  
     B. Clustering  
     C. Regression
  6. 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

|  |  |
| --- | --- |
| A supervised machine learning model used to predict numeric values. | Regression |
| A supervised machine learning model used to predict categories. | Classification |
| An unsupervised machine learning model used to group similar entities based on features. | Clustering |

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

**NOTE**: Each correct match is worth one point.

**AI Solutions**

* Computer vision
* Generative A
* Knowledge mining
* Natural language processing

**Answer Area**

|  |  |
| --- | --- |
| Create social media posts based on keywords | Natural language processing |
| Extract key words from social media posts | Natural language processing |
| Extract text from scanned documents | Computer vision |

* 1. Select the answer that correctly completes the sentence.

\_\_\_\_\_\_\_ executes a task against a specified compute target and enables systematic tracking for experimentation and workflows

* A component
* A dataset
* **A pipeline**
* An Azure Machine Learning job
  1. You have insurance claim reports that are stored as text files.  
     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. computer vision  
C. knowledge mining  
D. speech

* 1. Select the answer that correctly completes the sentence.

\_\_\_\_\_\_\_ extracts text from handwritten documents.

* Object detection
* Facial recognition
* Image classification
* **Optical character recognition (OCR)**
  1. 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**

* Evaluate the model against the validation dataset.
* Split the data randomly into training data and validation data.
* Train the model.
* Evaluate the model against the original dataset.
* Ingest and prepare a dataset.

1. **Ingest and prepare a dataset.**
2. **Split the data randomly into training data and validation data.**
3. **Train the model.**
4. **Evaluate the model against the validation dataset.**
   1. Select the answer that correctly completes the sentence.

Computer vision capabilities can be deployed to:

* develop a text-based chatbot for a website.
* **integrate a face detection feature into an online store.**
* suggest automated responses to incoming email.
  1. Match the principles of responsible AI to appropriate requirements.

To answer, drag the appropriate principle(s) 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.

**Principles**

* Fairness
* Privacy and security
* Reliability and safety
* Transparency

|  |  |
| --- | --- |
| The system must not discriminate based on gender, race, or age. | **Fairness** |
| Personal data must be visible only to approved users. | **Privacy and security** |
| Automated decision-making processes must be recorded so that approved users can identify why a decision was made. | **Transparency.** |

* 1. 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. reliability and safety  
B. fairness  
C. accountability  
**D. inclusiveness**

* 1. Select the answer that correctly completes the sentence.

For a vehicle, predicting the miles per gallon based on weight, engine power, and other factors is an example of…………………..

* anomaly detection.
* classification.
* clustering.
* **regression.**
  1. Match the tasks to the appropriate machine learning models.

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

**NOTE: Each correct selection is worth one point.**

**Models**

* Classification
* Clustering
* Regression

|  |  |
| --- | --- |
| Assign categories to passengers based on demographic data. | **Classification** |
| Predict the amount of consumed fuel based on flight distance. | **Regression** |
| Predict whether a passenger will miss their flight based on demographic data. | **Classification** |

* 1. What is the maximum image size that can be processed by using the prebuilt receipt model in Azure AI Document Intelligence?

A. 5 MB  
**B. 10 MB**C. 50 MB  
D. 100 MB

* 1. Which two types of content can be generated by using Azure OpenAI generative AI apps? Each correct answer is worth one point.

**NOTE: Each correct answer is worth one point.**

**A. images  
B. text**  
C. audio  
D. video

* 1. 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.

* 1. Select the answer that correctly completes the sentence.

As part of the Microsoft responsible AI principles, customers must \_\_\_\_\_\_ before they can use Azure OpenAI.

* commit to a minimum level of expenditure
* **obtain approval based on their intended usage**
* pay an upfront fee
* provide their credit card details.
  1. Which three actions improve the quality of responses returned by a generative AI solution that uses GPT-3.5? Each correct answer is worth one point.

NOTE: Each correct answer is worth one point.

**A. Add grounding data to prompts.**  
B. Modify tokenization.  
C. Modify system messages.  
**D. Provide additional examples to prompts.  
E. Add training data to prompts.**

* 1. 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**

|  |  |
| --- | --- |
| You can communicate with a bot by using a voice-activated virtual assistant. | Yes |
| You can communicate with a bot by using Microsoft Teams. | Yes |
| You can communicate with a bot by using a webchat interface. | Yes |

* 1. You need to develop a mobile app for employees to scan and store their expense receipts while traveling.

Which type of computer vision should you use?

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

* 1. You need to count the number of animals in a photograph.

Which type of computer vision should you use?

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

* 1. Select the answer that correctly completes the sentence.

**Answer Area**  
Generating text that describes an image is an example of \_\_\_\_\_\_.

* facial detection.
* **image classification.**
* object detection.
* optical character recognition (OCR).
  1. 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**

|  |  |
| --- | --- |
| When creating an object detection model in the Azure AI Custom Vision service, you must choose a classification type of either Multilabel or Multiclass. | No |
| You can create an object detection model in the Azure AI Custom Vision service to find the location of items within an image. | Yes |
| When creating an object detection model in the Azure AI Custom Vision service, you can select from a set of predefined domains. | No |

* 1. 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**

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

* 1. 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 match is worth one point.**

**Learning Types**

* Classification
* Clustering
* Regression

**Answer Area**

|  |  |
| --- | --- |
| Predict how many minutes late a flight will arrive based on the amount of snowfall at an airport. | Regression |
| Segment customers into a defined number of different groups to support a marketing department. | Clustering |
| Predict whether a student will complete a university course. | Classification |

* 1. 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 \_\_\_\_\_\_.

* classification.
* clustering.
* **regression.**
  1. To complete the sentence, select the appropriate option in the answer area.

**Answer Area**  
Data values that are used to make a prediction are called \_\_\_\_\_\_.

* dependant variables.
* **features.**
* identifiers.
* labels.
  1. Select the answer that correctly completes the sentence.

**Answer Area**  
In a machine learning model, the sets of data values that are used as inputs are called \_\_\_\_\_\_.

* **features.**
* functions.
* labels.
* instances.
  1. You use Azure Machine Learning designer to build a model pipeline.

What should you create before you can run the pipeline?

**A. a compute resource**  
B. a registered model  
C. a Jupyter notebook

* 1. A medical research project uses a large 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**

* 1. 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. language modelling**  
B. translation  
C. sentiment analysis  
D. named entity recognition

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

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

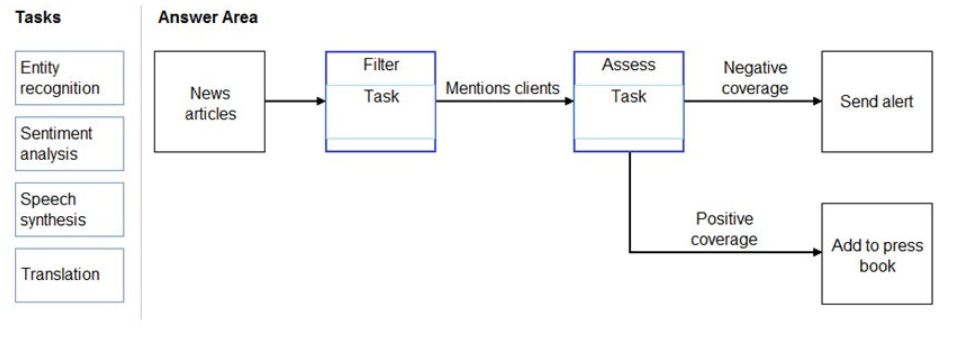
**NOTE: Each correct selection is worth one point.**

**Answer Area**

|  |  |
| --- | --- |
| A webchat bot can interact with users visiting a website. | Yes |
| Automatically generating captions for pre-recorded videos is an example of natural language processing. | Yes |
| 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 |

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



Ans:

A diagram of a process

Description automatically generated

* 1. 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**

* Accountability
* Fairness
* Inclusiveness
* Privacy and security
* Reliability and safety

|  |  |
| --- | --- |
| The decision-making process must be recorded so that staff can identify the reasoning behind a particular quote. | Accountability |
| A customer’s personal information must be visible only to staff who are involved in the decision-making process. | Privacy and security |
| The system must be accessible to customers who use screen readers or other assistive technology. | Inclusiveness |

* 1. You have a webchat bot that provides responses from a question answering knowledge base.

You need to ensure that the bot uses users' feedback to improve the relevance of the responses over time.

What should you use?

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

* 1. Which Azure OpenAI model can be used to develop code?

A. microsoft-swinx2-base-patch4-window12-192-22k  
B. Whisper  
**C. GPT-4-32k**  
D. DALL-E

* 1. When evaluating the performance of a model, the \_\_\_ displays the predicted and actual positives and negatives by using a grid of 0 and 1 values."

The options given are:

* AUC metric
* **confusion matrix**
* ROC curve
* threshold
  1. Which two tools can you use to call the Azure OpenAI service? Each correct answer presents a complete solution.

A. Azure Command-Line Interface (CLI)  
**B. Azure SDK for Python  
C. Azure REST API**  
D. Azure SDK for JavaScript

* 1. 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?"

The options provided are:  
A. Key phrase extraction  
B. Entity recognition  
C. Language detection  
**D. Sentiment analysis**

* 1. Predicting agricultural yields (measured in kg/ha) based on weather conditions and soil quality measurements is an example of which type of machine learning model?"

The options provided are:  
**A. Regression**  
B. Classification  
C. Clustering

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

The statements provided are:

|  |  |
| --- | --- |
| The Azure AI Language service can identify in which language text is written. | Yes |
| The Azure AI Language service can detect handwritten signatures in a document. | No |
| The Azure AI Language service can identify companies and organizations mentioned in a document. | Yes |

* 1. 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?"

The options provided are:  
A. Speech recognition  
B. Key phrase extraction  
C. Sentiment analysis  
**D. Entity recognition**

* 1. Identifying whether a kiosk user is annoyed by monitoring a video feed from the kiosk is an example of"

The options provided are:

* face detection.
* **facial analysis.**
* facial recognition.
* optical character recognition (OCR).