Question #61 *Topic 1*

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

Correct Answer: *A*

Question #62 *Topic 1*

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.

Correct Answer:

Answer Area

The interactive answering of questions entered by a user as part of an application is an example of [conversational AI.]

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

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

Previous Questions

Question #57 *Topic 1*

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 Text

Correct Answer: *BC*
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 #58 *Topic 1*

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?"

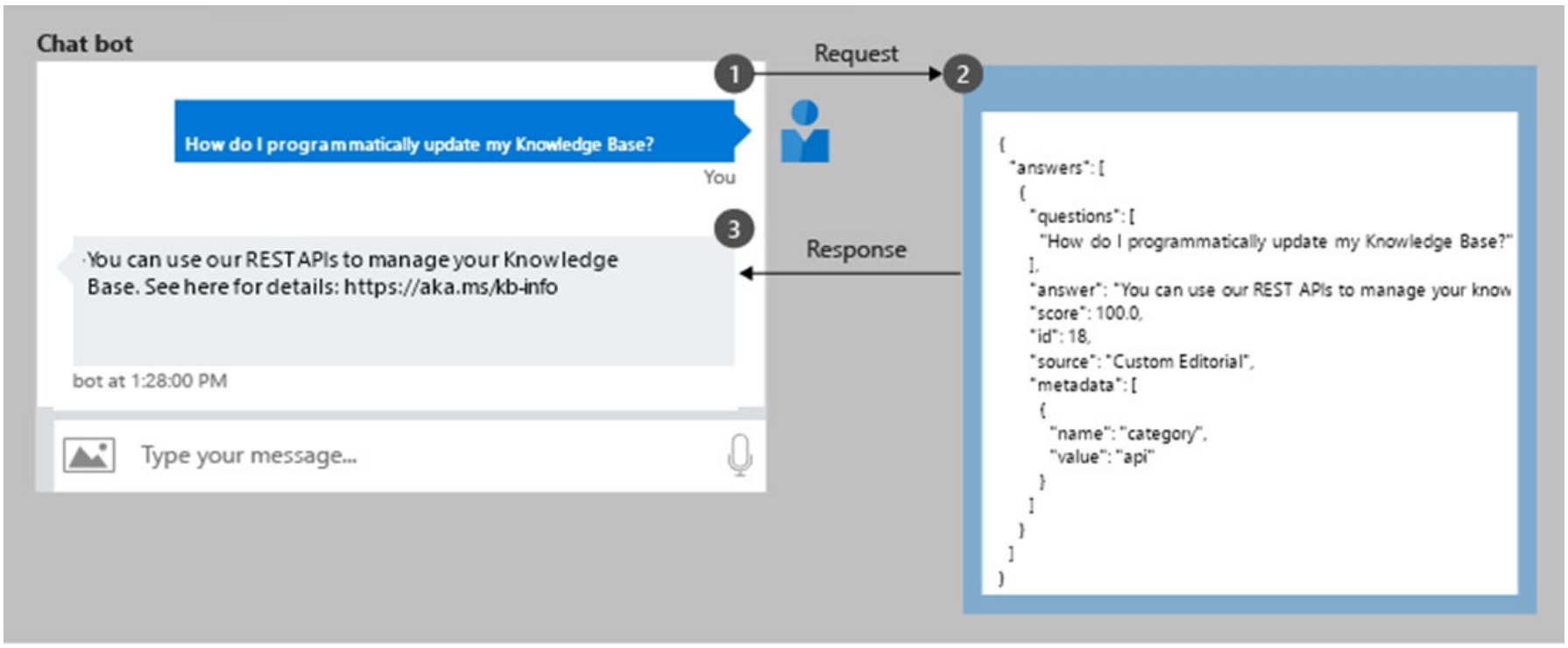
B. a website that uses a knowledge base to interactively respond to users' questions

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

Correct Answer: *AB*

You have the process shown in the following exhibit.



Which type 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

Correct Answer: *B*

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

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

Correct Answer: *BC*
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

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 Congnitive Services can be integrated.	○	○
Azure Bot Service engages with customers in a conversational manner.	○	○
Azure Bot Service can import frequently asked questions (FAQ) to question and answer sets.	○	○

Answer Area

Statements	Yes	No
Azure Bot Service and Azure Congnitive Services can be integrated.	○	○
Azure Bot Service engages with customers in a conversational manner.	○	○
Azure Bot Service can import frequently asked questions (FAQ) to question and answer sets.	○	○

Correct Answer:

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 #55 *Topic 1*

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.

Correct Answer: *ACE*
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 #56 *Topic 1*

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)

Correct Answer: *A*
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/

Previous Questions Next Questions

Question #49 *Topic 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?

A. language detection

B. sentiment analysis

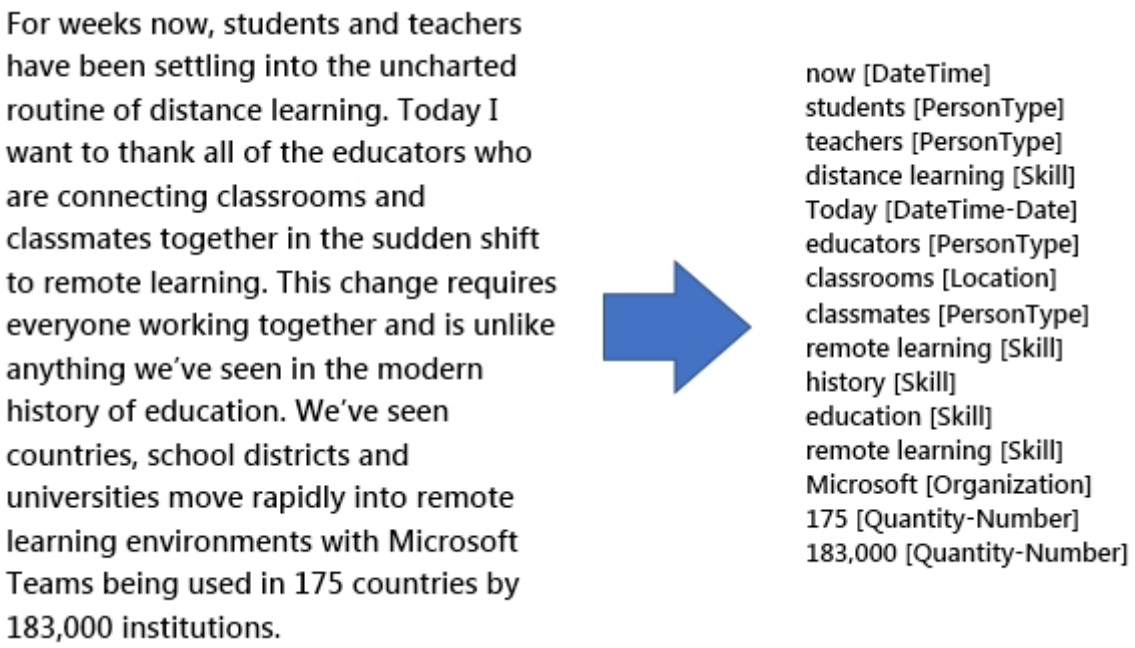
C. key phrase extraction

D. entity recognition

Correct Answer: *B*
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 #50 *Topic 1*

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

Correct Answer: *B*
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://azure.microsoft.com/en-us/services/cognitive-services/text-analytics

DRAG DROP -

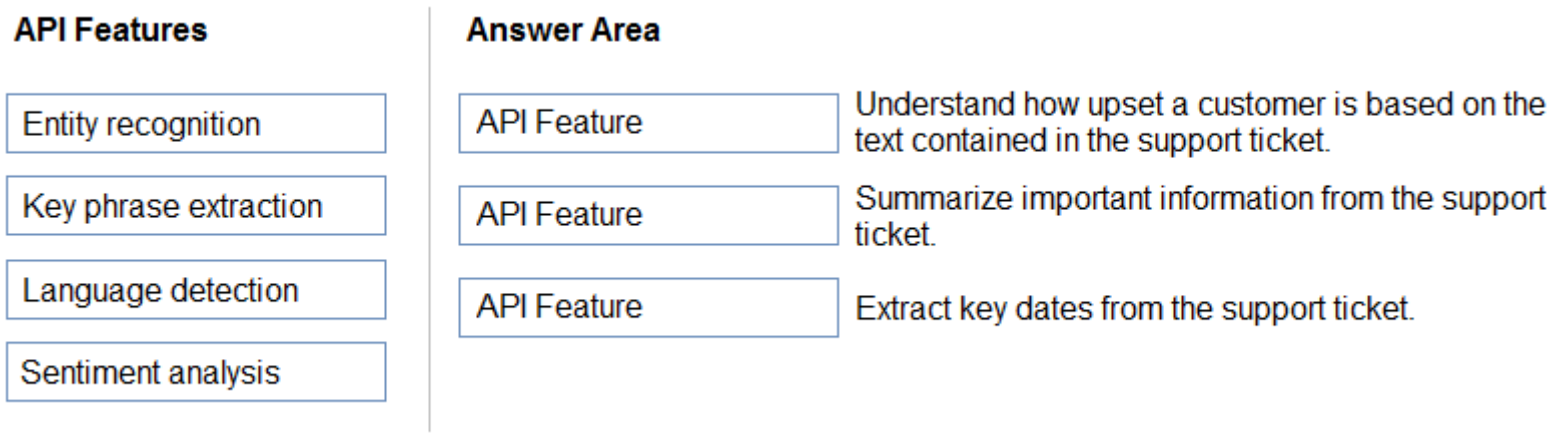
You plan to apply Text Analytics API features to a technical support ticketing system.

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

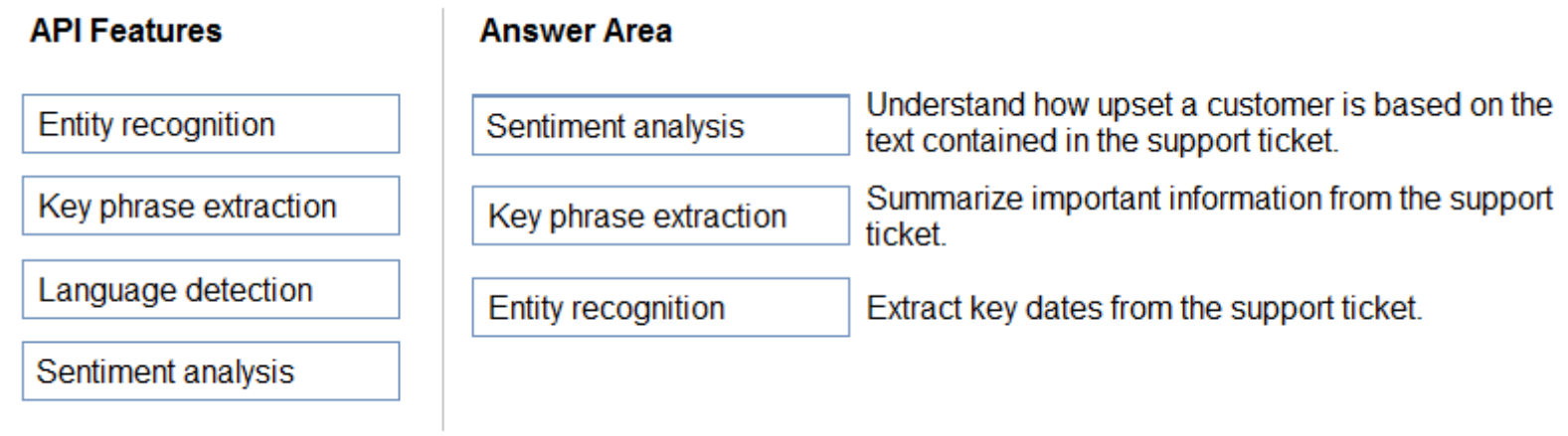
To answer, drag the appropriate feature from the column on the left to its scenario on the right. Each feature may be used once, more than once, or not at all.

NOTE: Each correct selection is worth one point.

Select and Place:



Correct Answer:



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 #52 *Topic 1*

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

Correct Answer: *B*
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

Previous Questions Next Questions

Question #45 *Topic 1*

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

A. Translator Text

B. Text Analytics

C. Speech

D. Language Understanding (LUIS)

Correct Answer: *A*
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/

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.	○	○
The Text Analytics service can detect handwritten signatures in a document.	○	○
The Text Analytics service can identify companies and organizations mentioned in a document.	○	○

Answer Area

	Statements	Yes	No
Correct Answer:	The Text Analytics service can identify in which language text is written.	○	○
	The Text Analytics service can detect handwritten signatures in a document.	○	○
	The Text Analytics service can identify companies and organizations mentioned in a document.	○	○

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

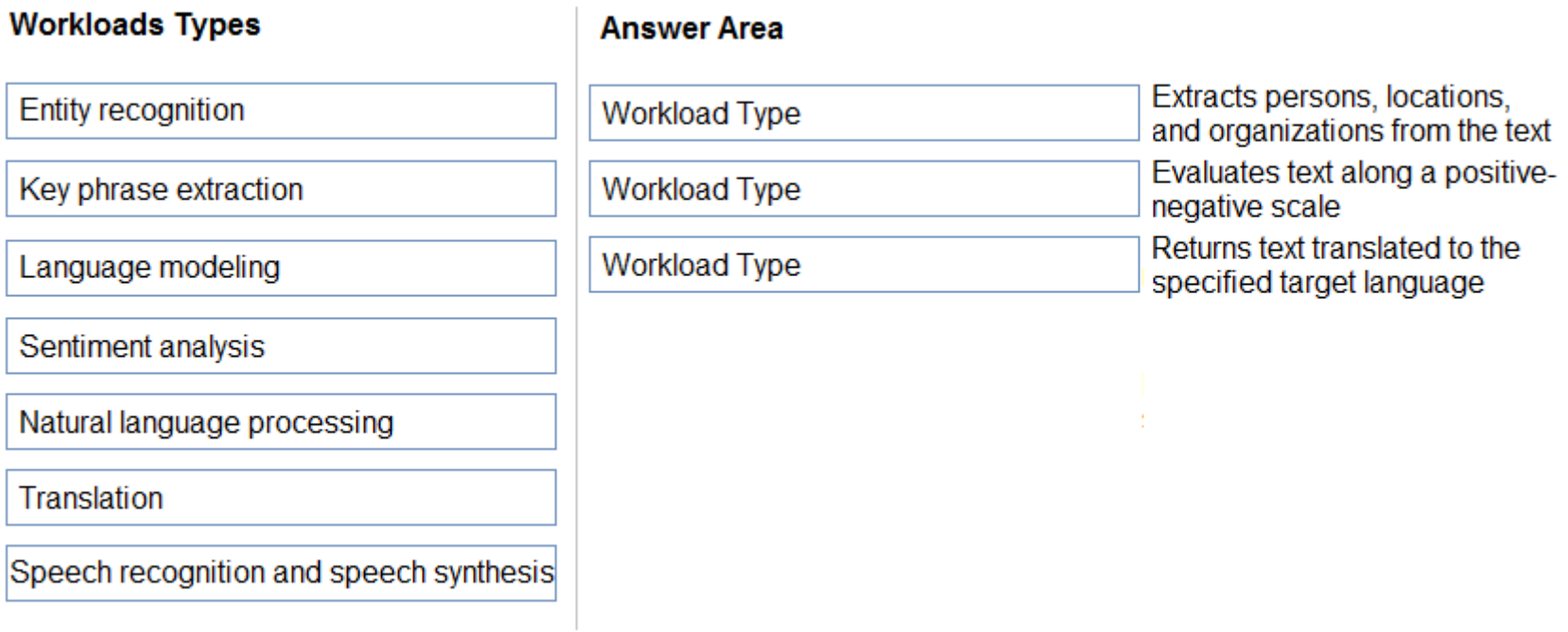
DRAG DROP -

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

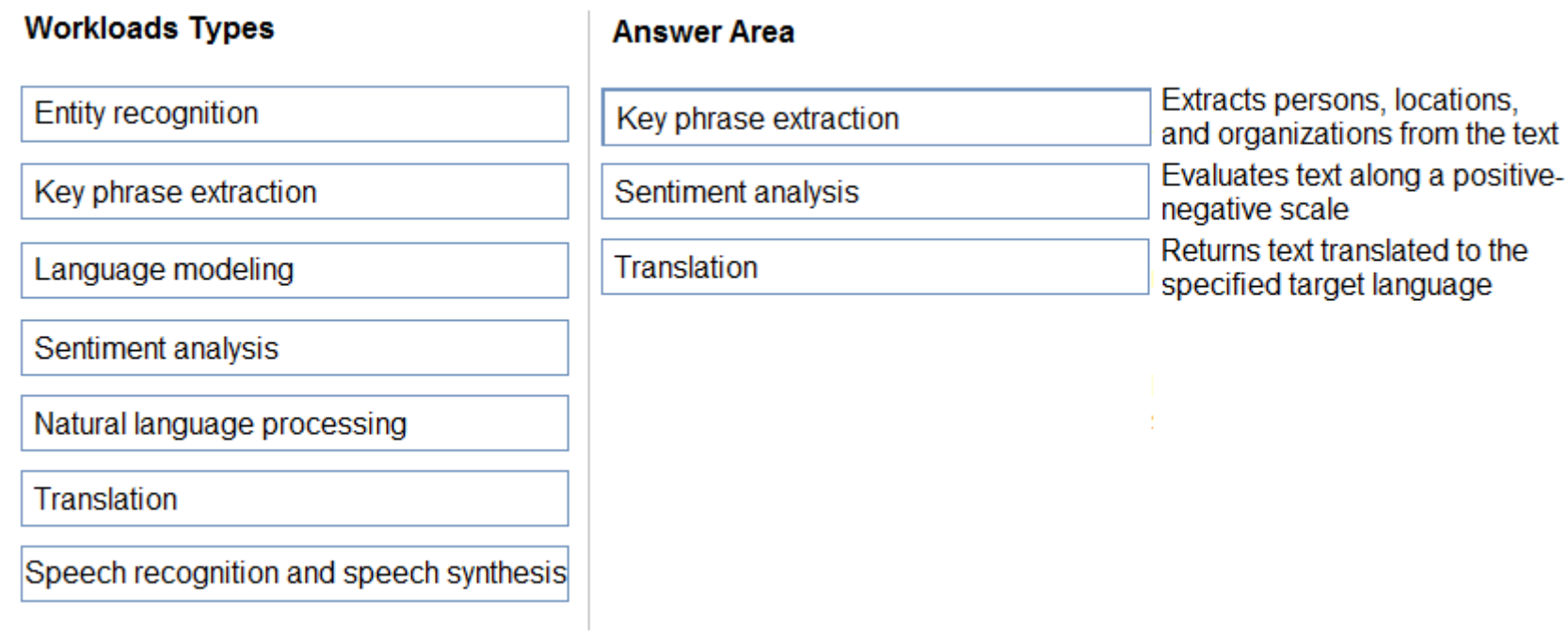
To answer, drag the appropriate workload type from the column on the left to its scenario on the right. Each workload type may be used once, more than once, or not at all.

NOTE: Each correct selection is worth one point.

Select and Place:



Correct Answer:



Box 1: Key phrase extraction -

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

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.

Incorrect Answers:

Not Natural language processing (NLP), which is used for tasks such as sentiment analysis, topic detection, language detection, key phrase extraction, and document categorization.

Reference:

https://azure.microsoft.com/en-us/services/cognitive-services/text-analytics

Question #48 *Topic 1*

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.	○	○

Correct 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.	○	○

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

Previous Questions

Next Questions

Question #41 *Topic 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. anomaly detection

B. semantic segmentation

C. regression

D. natural language processing

Correct Answer: *D*
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 #42 *Topic 1*

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 Area

Natural language processing can be used to

Correct Answer:

- 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.

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 #43 *Topic 1*

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

A. Translator Text

B. Text Analytics

C. Speech

D. Language Understanding (LUIS)

Correct Answer: *B*
Text Analytics is an AI service that uncovers insights such as sentiment, entities, and key phrases in unstructured text.
Incorrect Answers:
D: Language Understanding (LUIS) is a cloud-based API service, not an 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://azure.microsoft.com/en-us/services/cognitive-services/text-analytics/ https://docs.microsoft.com/en-us/azure/cognitive-services/luis/what-is-luis

Question #44 *Topic 1*

You are developing a chatbot solution in Azure.
Which service should you use to determine a user's intent?

A. Translator Text

B. QnA Maker

C. Speech

D. Language Understanding (LUIS)

Correct Answer: *D*
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

Previous Questions Next Questions

Question #37 *Topic 1*

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.

Correct Answer: *BC*
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 #38 *Topic 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

Correct Answer: *B*
Classification is a machine learning method that uses data to determine the category, type, or class of an item or row of data.
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 #39 *Topic 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. 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.

Correct Answer: *BE*
B: 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.
E: 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. It uses the latest models and works with text on a variety of surfaces and backgrounds. These include receipts, posters, business cards, letters, and whiteboards. The two OCR APIs support extracting printed text in several languages.
Reference:
https://docs.microsoft.com/en-us/azure/cognitive-services/computer-vision/overview

Question #40 *Topic 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. anomaly detection

B. conversational AI

C. computer vision

D. natural language processing

Correct Answer: *C*
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

Previous Questions Next Questions

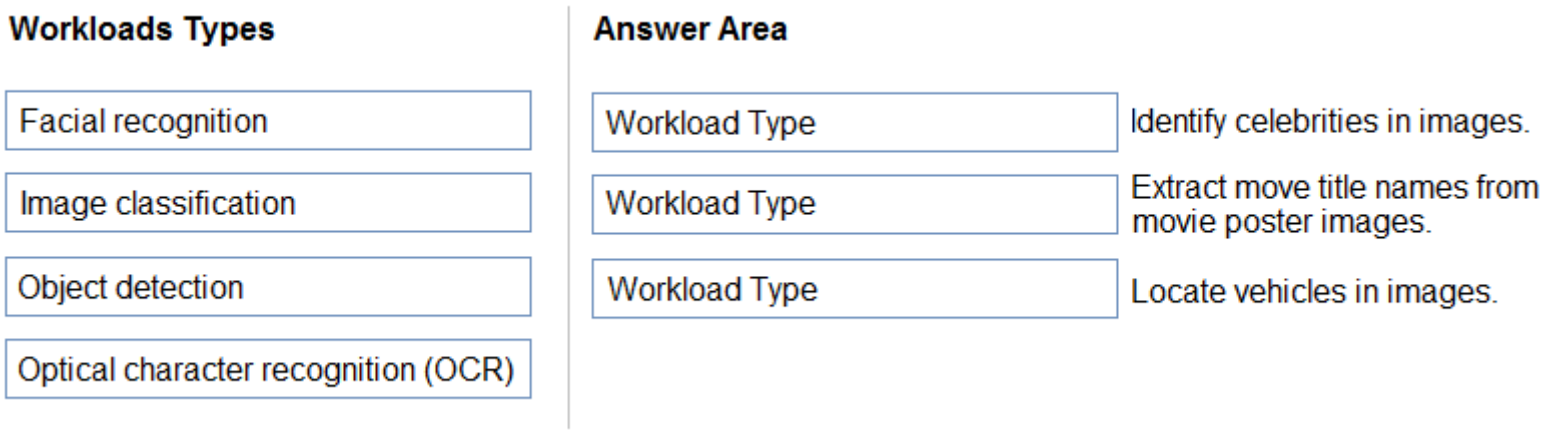
DRAG DROP -

Match the types of computer vision to the appropriate scenarios.

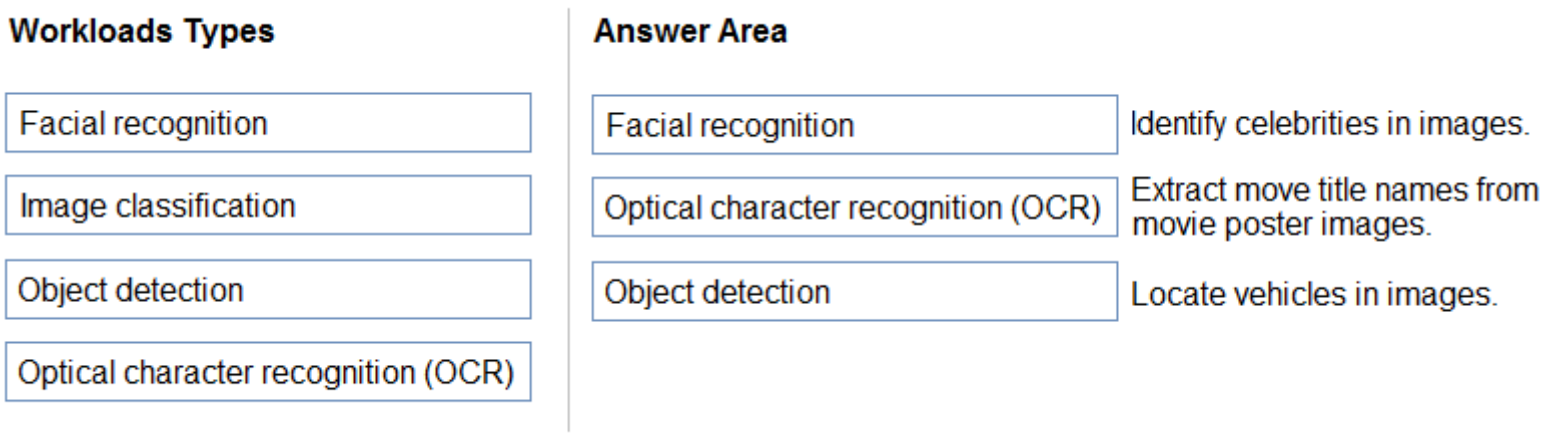
To answer, drag the appropriate workload type from the column on the left to its scenario on the right. Each workload type may be used once, more than once, or not at all.

NOTE: Each correct selection is worth one point.

Select and Place:



Correct Answer:



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

Question #34 *Topic 1*

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

Correct Answer: *B*
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

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

Correct Answer:

Answer Area

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

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

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:

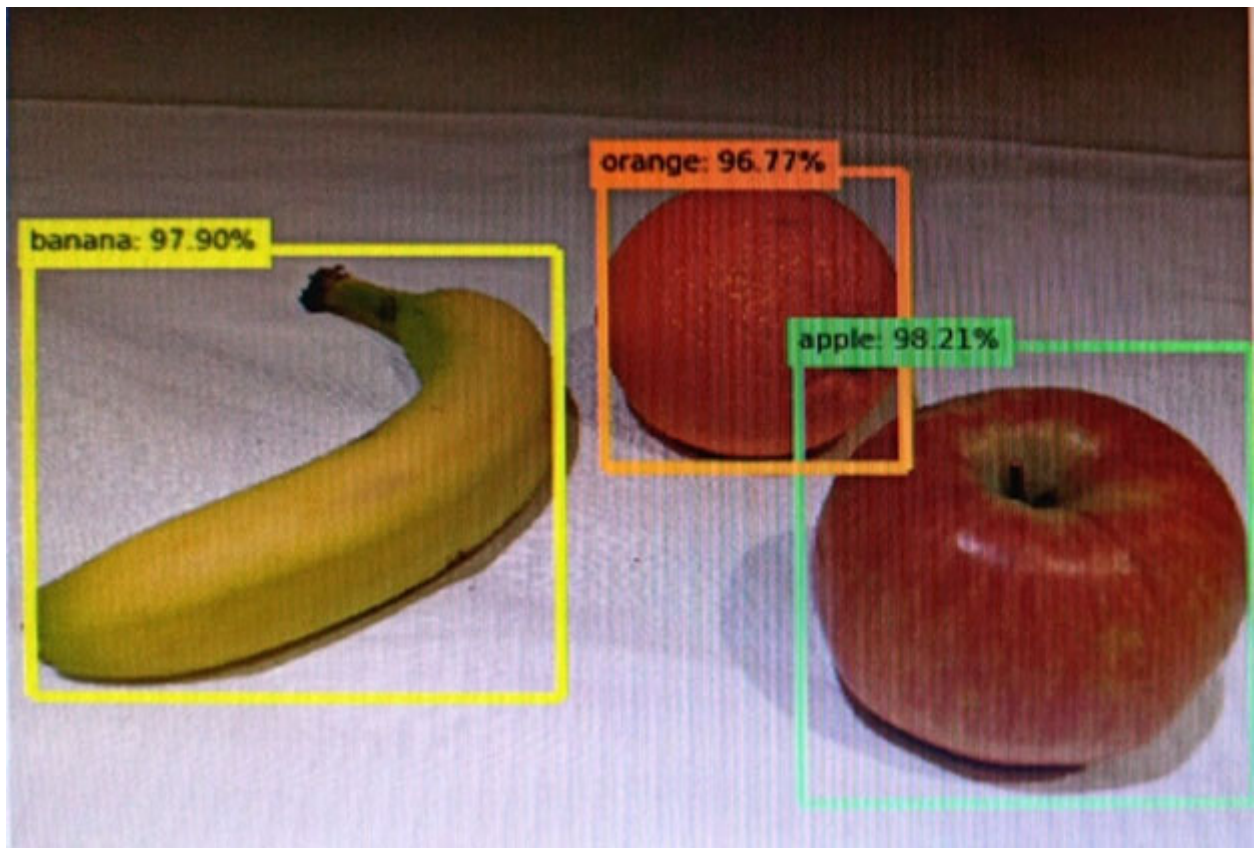
Computer Vision:

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

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. semantic segmentation

C. optical character recognition (OCR)

D. image classification

Correct Answer: *A*

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

Previous Questions Next Questions

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 Area

Correct Answer:

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

- classification
- regression
- clustering

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

Example: Regression Model: A Boosted Decision Tree algorithm was used to create and train the model for predicting the repayment rate.

Reference:

https://gallery.azure.ai/Experiment/Student-Loan-Repayment-Rate-Prediction

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.	○	○
You should evaluate a model by using the same data used to train the model.	○	○
Accuracy is always the primary metric used to measure a model's performance.	○	○

Correct Answer:

Answer Area

Statements	Yes	No
Labelling is the process of tagging training data with known values.	○	○
You should evaluate a model by using the same data used to train the model.	○	○
Accuracy is always the primary metric used to measure a model's performance.	○	○

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 #31 *Topic 1*

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)

Correct Answer: *D*
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

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?

Correct 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?

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.

Reference:

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

Previous Questions Next Questions

Question #25 *Topic 1*

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

Correct Answer: *C*
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/studio-module-reference/machine-learning-initialize-model-clustering

Question #26 *Topic 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?

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

Correct Answer: *B*
The label is the column you want to predict. The identified Featuresare 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

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

Correct Answer: *B*
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

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.	○	○
Automated machine learning can automatically infer the training data from the use case provided.	○	○
Automated machine learning works by running multiple training iterations that are scored and ranked by the metrics you specify.	○	○
Automated machine learning enables you to specify a dataset and will automatically understand which label to predict.	○	○

Correct Answer:

Answer Area

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

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 #21 *Topic 1*

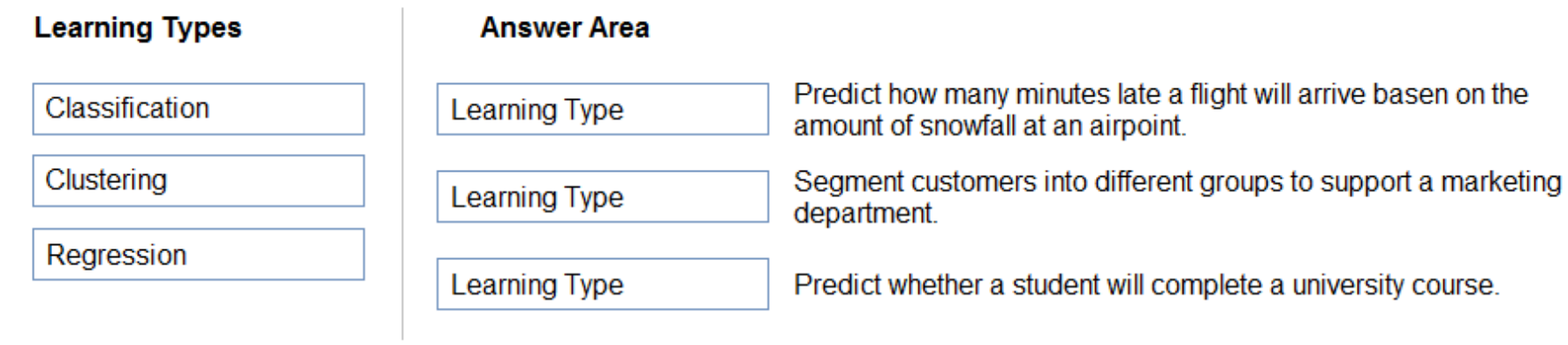
DRAG DROP -

Match the types of machine learning to the appropriate scenarios.

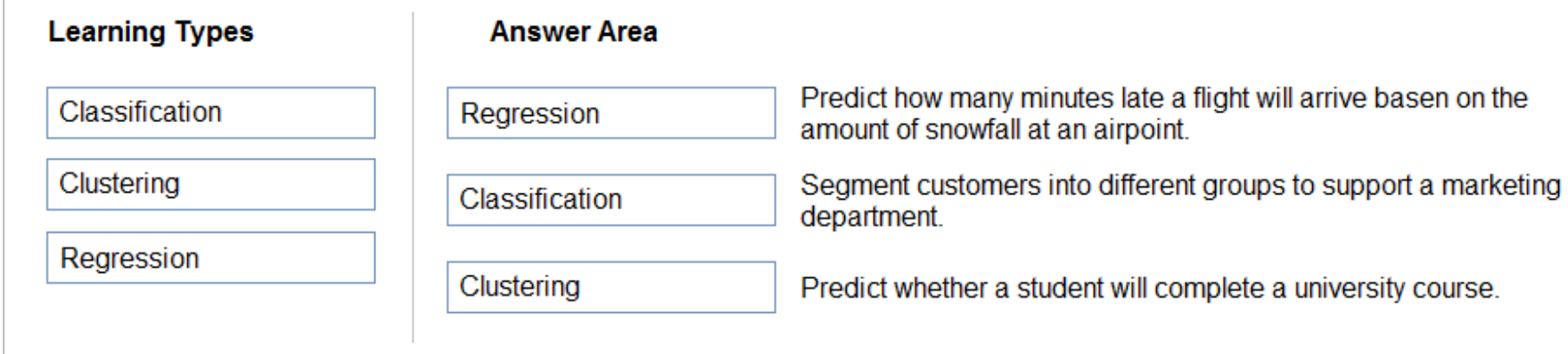
To answer, drag the appropriate machine learning type from the column on the left to its scenario on the right. Each machine learning type may be used once, more than once, or not at all.

NOTE: Each correct selection is worth one point.

Select and Place:



Correct Answer:



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: Classification -

Classification is a machine learning method that uses data to determine the category, type, or class of an item or row of data.

Box 3: 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.

Reference:

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

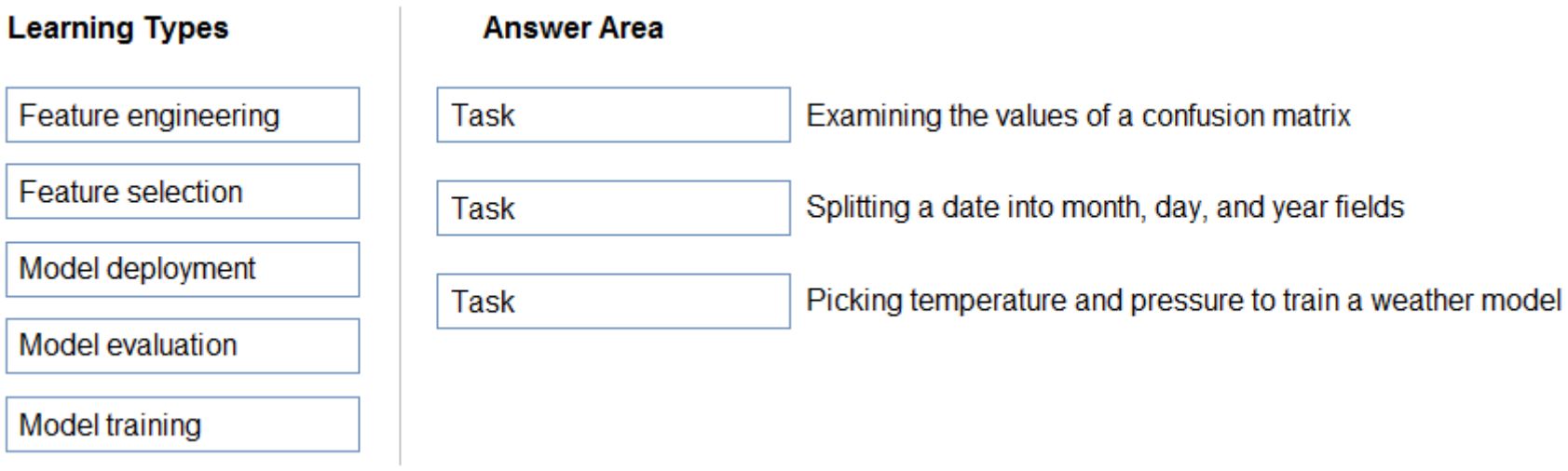
DRAG DROP -

Match the machine learning tasks to the appropriate scenarios.

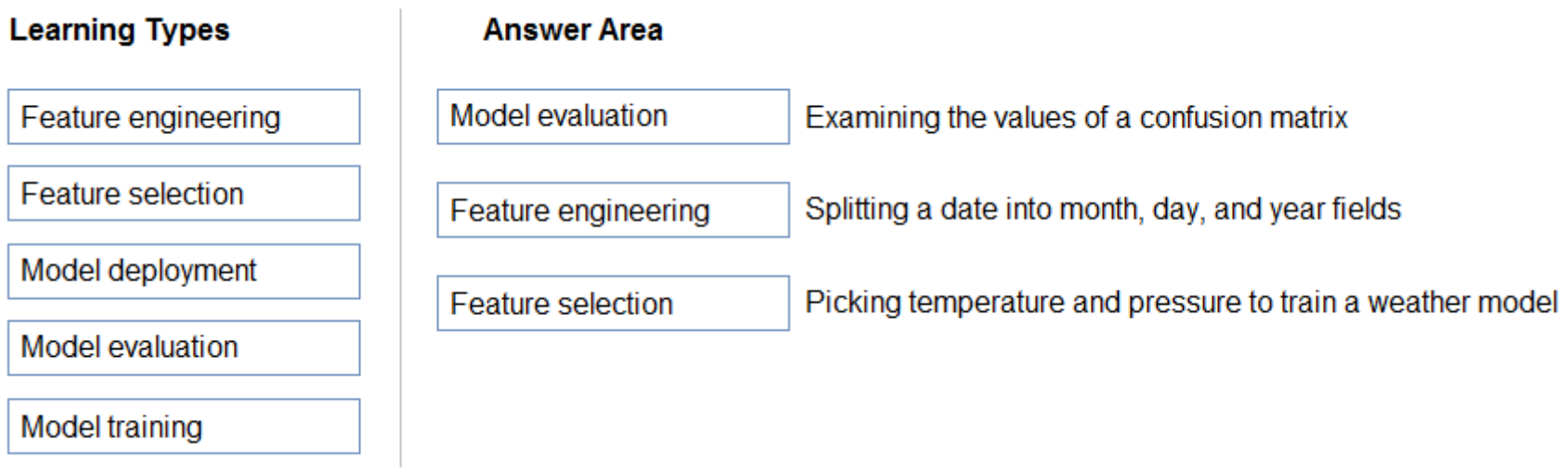
To answer, drag the appropriate task from the column on the left to its scenario on the right. Each task may be used once, more than once, or not at all.

NOTE: Each correct selection is worth one point.

Select and Place:



Correct Answer:



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

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 Area

Data values that influence the prediction of a model are called [▼]
- dependant variables.
- features.
- identifiers.
- labels.

Correct Answer:

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.

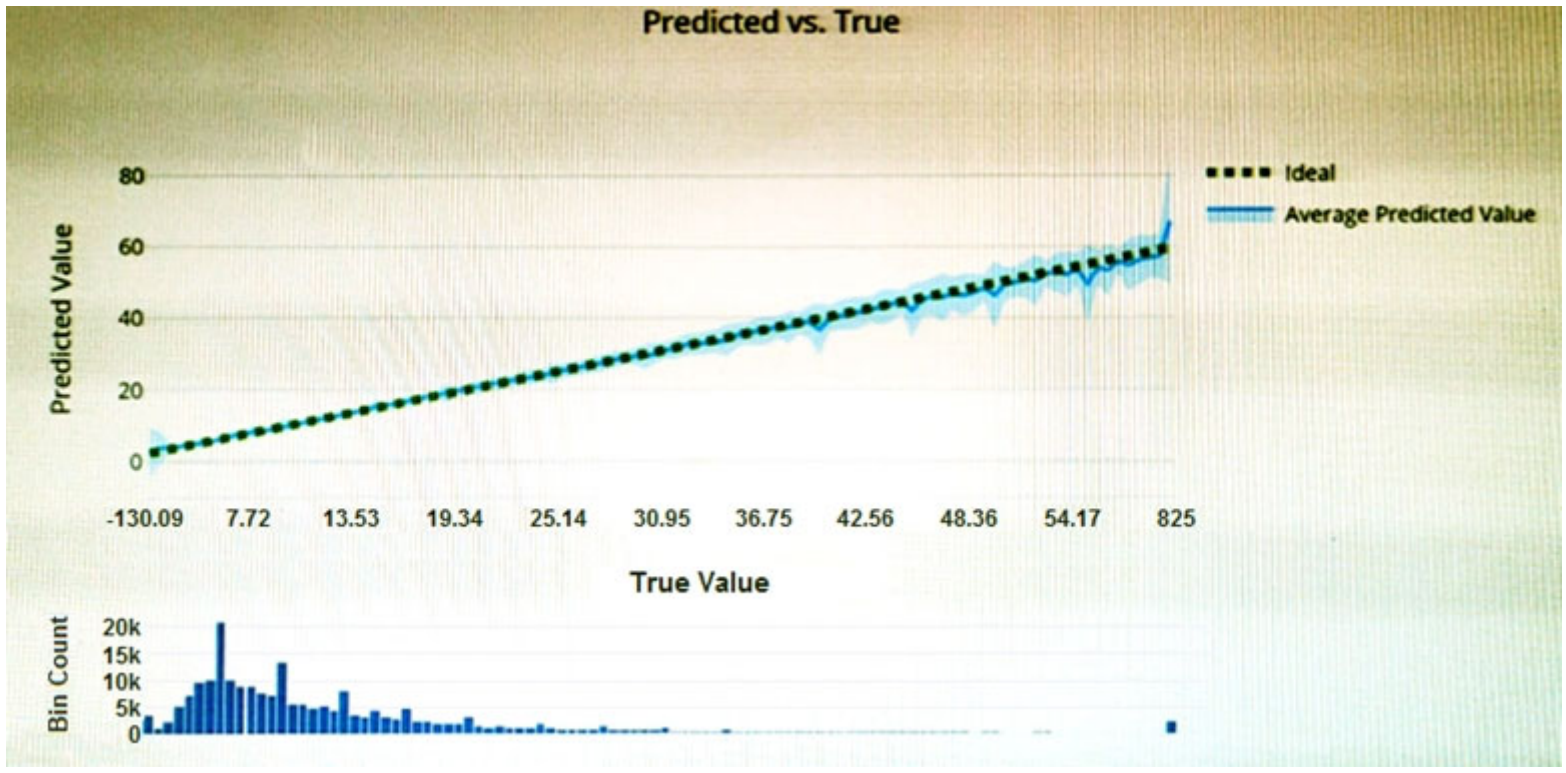
Incorrect Answers:

Not features: 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://www.cloudfactory.com/data-labeling-guide

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

Correct Answer: *B*

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

Previous Questions Next Questions

Question #17 *Topic 1*

HOTSPOT -

You have the following dataset.

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

Correct Answer:

Answer Area

Household Income: [A feature]
- A feature
- A label

House Price Category: [A label]
- A feature
- A label

Reference:

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

Question #18 *Topic 1*

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)

Correct Answer: *A*

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.

Reference:

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

Question #19 *Topic 1*

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

Correct Answer: *AD*
You can drag-and-drop datasets and modules onto the canvas.
Reference:
https://docs.microsoft.com/en-us/azure/machine-learning/concept-designer

Question #20 *Topic 1*

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

Correct Answer: *C*
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

Previous Questions Next Questions

Question #13 *Topic 1*

You use Azure Machine Learning designer to publish an inference pipeline.
Which two parameters should you use to consume the pipeline? 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

Correct Answer: *AD*
A: The trained model is stored as a Dataset module in the module palette. You can find it under My Datasets.
Azure Machine Learning designer lets you visually connect datasets and modules on an interactive canvas to create machine learning models.
D: You can consume a published pipeline in the Published pipelines page. Select a published pipeline and find the REST endpoint of it.
Reference:
https://docs.microsoft.com/en-us/azure/machine-learning/how-to-run-batch-predictions-designer https://docs.microsoft.com/en-us/azure/machine-learning/concept-designer

Question #14 *Topic 1*

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.

Correct 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.

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

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.

Correct Answer:

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.

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

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.	○	○
Azure Machine Learning designer enables you to save your progress as a pipeline draft.	○	○
Azure Machine Learning designer enables you to include custom JavaScript functions.	○	○

Correct 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.	○	○
Azure Machine Learning designer enables you to save your progress as a pipeline draft.	○	○
Azure Machine Learning designer enables you to include custom JavaScript functions.	○	○

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

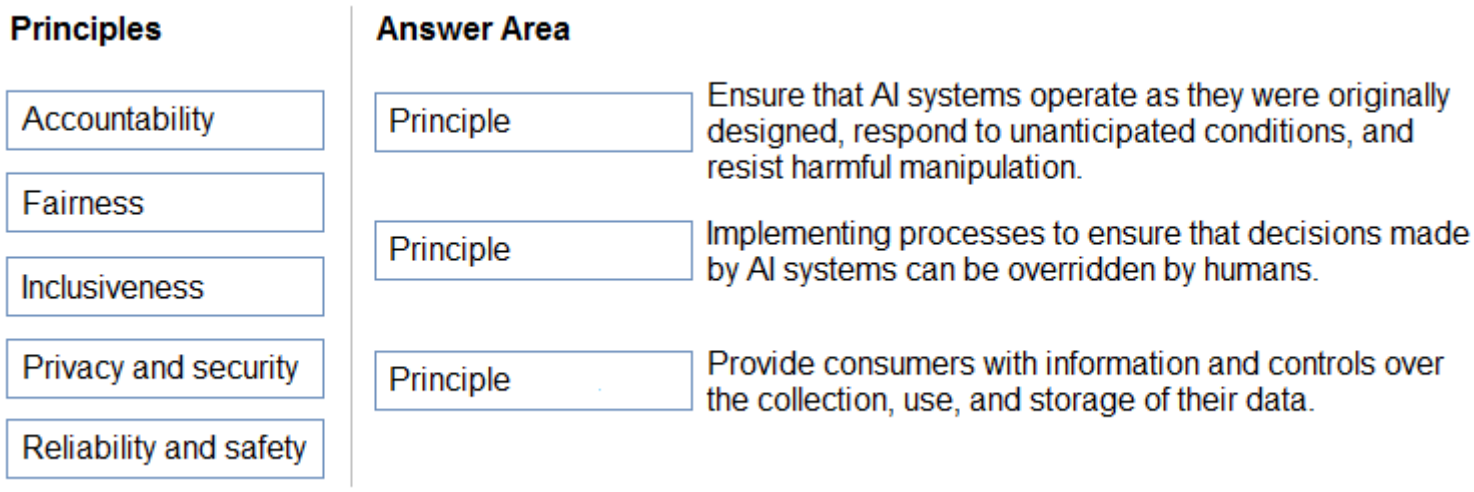
DRAG DROP -

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

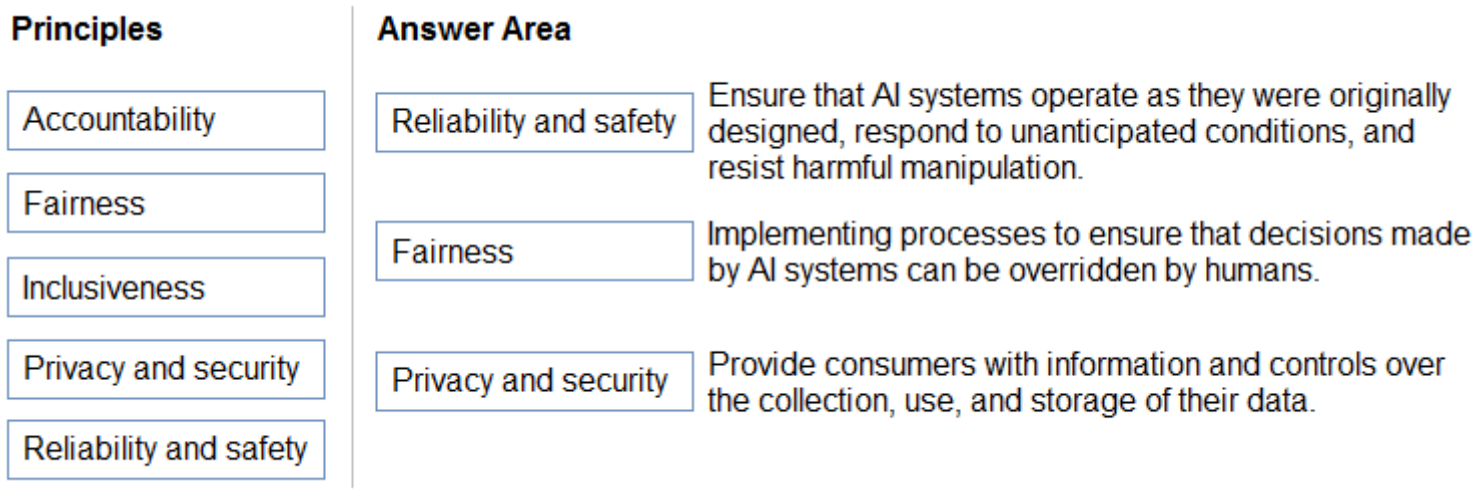
To answer, drag the appropriate principle from the column on the left to its description on the right. Each principle may be used once, more than once, or not at all.

NOTE: Each correct selection is worth one point.

Select and Place:



Correct Answer:



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 #10 *Topic 1*

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 [▼] principle for responsible AI should be applied to ensure consistent operation of the system during unexpected circumstances.

- inclusiveness
- accountability
- reliability and safety
- fairness

Correct 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.

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 *Topic 1*

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. Ink Recognizer

D. Custom Vision

Correct Answer: *A*

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 #12 *Topic 1*

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 [ ] service.

- Custom Vision
- Form Recognizer
- Ink Recognizer
- Text Analytics

Answer Area

The ability to extract subtotals and totals from a receipt is a capability of the [ ] service.

- Custom Vision
- Form Recognizer
- Ink Recognizer
- Text Analytics

Correct Answer:

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/

Topic 1 - Single Topic

Question #1 *Topic 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. increased sales

B. a reduced workload for the customer service agents

C. improved product reliability

Correct Answer: *B*

Question #2 *Topic 1*

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.

Correct Answer: *D*

In Azure Machine Learning, the percentage split is the available technique to split the data. In this technique, random data of a given percentage will be split to train and test data.

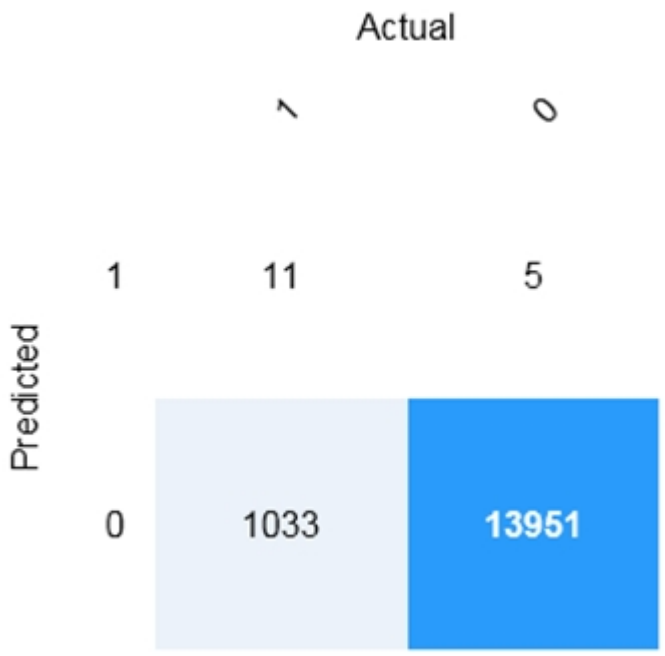
Reference:

https://www.sqlshack.com/prediction-in-azure-machine-learning/

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.



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 Area

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

- 5
- 11
- 1,033
- 13,951

Correct Answer:

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

- 5
- 11
- 1,033
- 13,951

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 #4 *Topic 1*

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.

Correct Answer: *B*
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 explain ability, 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 *Topic 1*

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.	○	○
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 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.	○	○

Correct Answer:

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 *Topic 1*

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

Correct 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

Privacy and security.

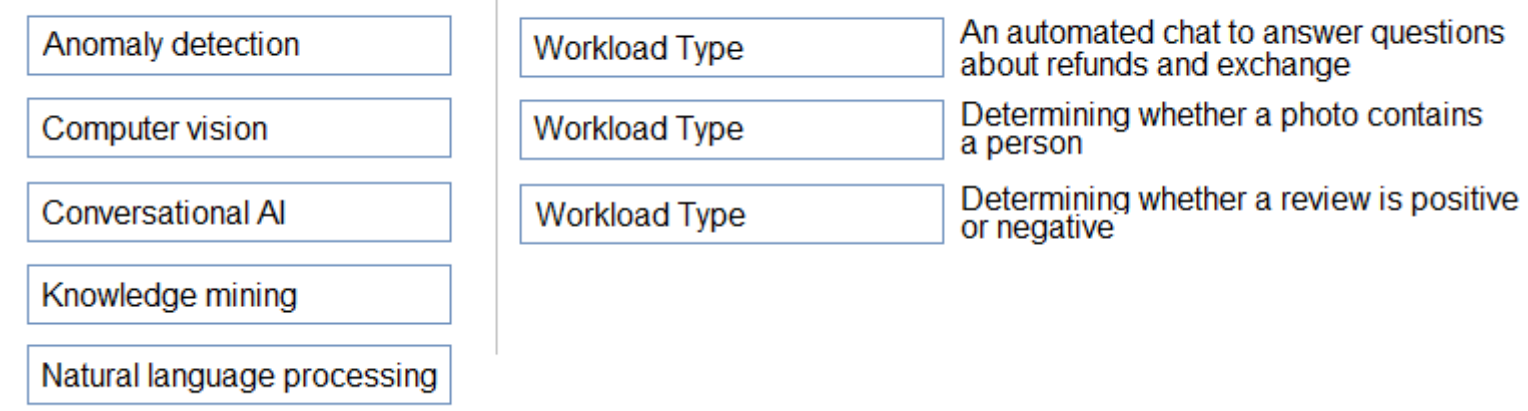
As AI becomes more prevalent, protecting privacy and securing important personal and business information is becoming more critical and complex. With AI, privacy and data security issues require especially close attention because access to data is essential for AI systems to make accurate and informed 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:

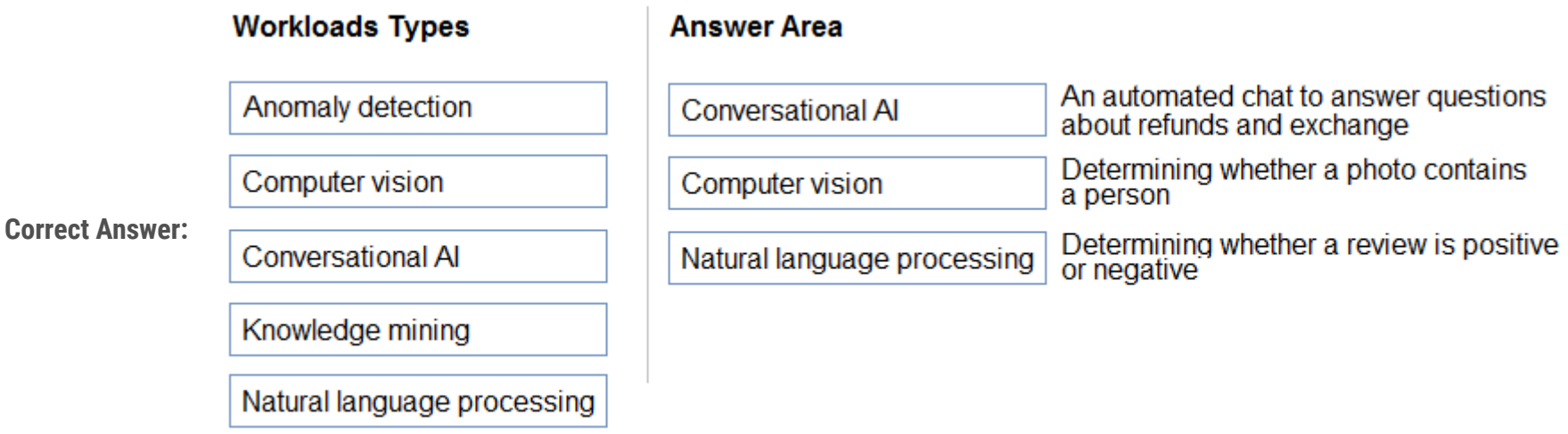
https://docs.microsoft.com/en-us/learn/modules/responsible-ai-principles/4-guiding-principles

Question #7 *Topic 1*

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:



Correct Answer:



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 #8 *Topic 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. fairness

B. inclusiveness

C. reliability and safety

D. accountability

Correct Answer: *B*
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