

Microsoft AI-900

Microsoft Azure AI Fundamentals

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Question: 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

Answer: B

Explanation:

Full Detailed Explanation with exact Extract from your Official Study guide and Trained Data at least 250 to 300 words in

The correct answer is B. a reduced workload for the customer service agents.

According to the Microsoft Azure AI Fundamentals (AI-900) official study guide and Microsoft Learn module “Describe features of common AI workloads”, conversational AI solutions such as chatbots are primarily designed to automate repetitive and routine customer interactions. The key business value emphasized in these materials is operational efficiency—chatbots allow organizations to respond to a high volume of customer queries without relying solely on human agents. This results in reduced workload, lower operational costs, and faster response times.

Microsoft’s AI-900 learning objectives highlight that AI can be applied to automate tasks that previously required human interaction. In the context of customer support, a webchat bot powered by Azure AI services (such as Azure Bot Service or Azure Cognitive Services for Language) can handle frequently asked questions like order status, password resets, or basic troubleshooting. This allows human agents to focus their time and skills on more complex issues that require empathy, reasoning, or decision-making—tasks that AI cannot yet handle as effectively.

Additionally, the AI-900 course materials explain that one of the measurable business benefits of deploying AI-driven chatbots is improved efficiency and scalability. Chatbots can handle thousands of simultaneous interactions, something that human teams cannot easily do. As a result, the organization experiences reduced operational pressure on support staff, improved customer satisfaction due to quicker responses, and optimized resource utilization.

Options A and C are incorrect because chatbots do not directly influence sales growth or product reliability. While increased customer satisfaction might indirectly support sales, it is not the primary or guaranteed outcome of implementing a chatbot. Similarly, product reliability is tied to engineering quality, not customer service automation.

Therefore, based on the official AI-900 study materials and Microsoft Learn concepts, the best and verified answer is B. a reduced workload for the customer service agents.

Question: 2

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

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

Answer: B

Explanation:

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

The correct answer is B. Randomly split the data into rows for training and rows for evaluation.

According to the Microsoft Azure AI Fundamentals (AI-900) official study guide and the Microsoft Learn module “Describe fundamental principles of machine learning on Azure”, the process of developing a machine learning model involves dividing the available dataset into two or more parts—commonly training data and evaluation (or testing) data. The goal is to ensure that the model can learn patterns from one subset of the data (training set) and then be objectively tested on unseen data (evaluation set) to measure how well it generalizes to new situations.

The training dataset contains both features (the measurable inputs) and labels (the target outputs).

The model learns from the patterns and relationships between these features and labels. The evaluation dataset also contains features and labels, but it is kept separate during the training phase.

Once the model has been trained, it is tested on this unseen evaluation data to calculate metrics like accuracy, precision, recall, or F1 score.

Microsoft emphasizes that the data split should be random and based on rows, not columns. Each row represents a complete observation (for example, one customer record, one transaction, or one image). Randomly splitting ensures that both subsets represent the same distribution of data, avoiding bias. Splitting by columns would separate features themselves, which would make the model training invalid.

The AI-900 materials often illustrate this using Azure Machine Learning’s data preparation workflow, where data is randomly divided (commonly 70% for training and 30% for testing). This ensures the model learns from diverse examples and is fairly evaluated.

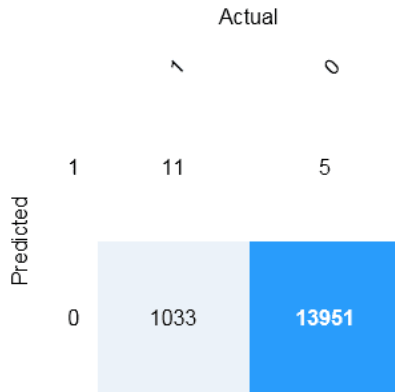
Therefore, the verified and correct approach, as per Microsoft’s official guidance, is B. Randomly split the data into rows for training and rows for evaluation.

Question: 3

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.

Answer Area

There are [answer choice] correctly predicted positives.

5

11

1,033

13,951

There are [answer choice] false negatives.

5

11

1,033

13,951

Answer:

Answer Area

There are [answer choice] correctly predicted positives.

5

11

1,033

13,951

There are [answer choice] false negatives.

5

11

1,033

13,951

Explanation:

Box 1: 11

	Predicted	
	Positive	Negative
Actual True	TP	FN
Actual False	FP	TN

TP = True Positive.

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

Box 2: 1,033

FN = False Negative

Reference:

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

Finding TP is easy. It basically means the value where Predicted and True value is 1 and that is 11 in this case.

False Negative means where true value was 1 but predicted value was 0 and that is 1033 in this case. The confusion matrix shows cases where both the predicted and actual values were 1 (known as true positives) at the top left, and cases where both the predicted and the actual values were 0 (true negatives) at the bottom right. The other cells show cases where the predicted and actual values differ (false positives and false negatives).

<https://docs.microsoft.com/en-us/learn/modules/create-classification-model-azure-machinelearning-designer/evaluate-model>

Question: 4

You build a machine learning model by using the automated machine learning user interface (UI). You need to ensure that the model meets the Microsoft transparency principle for responsible AI. What should you do?

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

Answer: B

Explanation:

Model Explain Ability.

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

explain the model. With model 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-azuremachine-learning-service/>

Question: 5

HOTSPOT

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

NOTE: Each correct selection is worth one point.

Answer Area

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

Answer:

Answer Area

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

Explanation:

Box 1: No

Box 2: Yes

Box 3: Yes

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/anomalydetection>

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