

# Exam AI-900: Microsoft Azure AI Fundamentals – Skills Measured

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*The English language version of this exam was updated on April 29, 2022.*

*Following the current exam guide, we have included a table that compares the current study guide to the new one by functional group, showing the changes that were made to the exam on that date. We have also included the previous study guide for reference purposes.*

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**NOTE: Passing score: 700.** [Learn more about exam scores.](#)

## Audience Profile

This exam is an opportunity to demonstrate knowledge of machine learning (ML) and artificial intelligence (AI) concepts and related Microsoft Azure services. Candidates for this exam should have familiarity with AI-900's self-paced or instructor-led learning material.

This exam is intended for candidates with both technical and non-technical backgrounds. Data science and software engineering experience are not required; however, awareness of cloud basics and client-server applications would be beneficial.

Azure AI Fundamentals can be used to prepare for other Azure role-based certifications like Azure Data Scientist Associate or Azure AI Engineer Associate, but it is not a prerequisite for any of them.

## Skills Measured

NOTE: The bullets that follow each of the skills measured are intended to illustrate how we are assessing that skill. Related topics may not be covered in the exam.

NOTE: Most questions cover features that are general availability (GA). The exam may contain questions on Preview features if those features are commonly used.

## Describe Artificial Intelligence workloads and considerations (20—25%)

### Identify features of common AI workloads

- identify features of anomaly detection workloads

- identify computer vision workloads
- identify natural language processing workloads
- identify knowledge mining workloads

### **Identify guiding principles for responsible AI**

- describe considerations for fairness in an AI solution
- describe considerations for reliability and safety in an AI solution
- describe considerations for privacy and security in an AI solution
- describe considerations for inclusiveness in an AI solution • describe considerations for transparency in an AI solution
- describe considerations for accountability in an AI solution

## **Describe fundamental principles of machine learning on Azure (25—30%)**

### **Identify common machine learning types**

- identify regression machine learning scenarios
- identify classification machine learning scenarios
- identify clustering machine learning scenarios

### **Describe core machine learning concepts**

- identify features and labels in a dataset for machine learning
- describe how training and validation datasets are used in machine learning

### **Describe capabilities of visual tools in Azure Machine Learning Studio**

- automated machine learning
- azure Machine Learning designer

## **Describe features of computer vision workloads on Azure (15—20%)**

### **Identify common types of computer vision solution:**

- identify features of image classification solutions
- identify features of object detection solutions
- identify features of optical character recognition solutions
- identify features of facial detection, facial recognition, and facial analysis solutions

### Identify Azure tools and services for computer vision tasks

- identify capabilities of the Computer Vision service
- identify capabilities of the Custom Vision service
- identify capabilities of the Face service
- identify capabilities of the Form Recognizer service

## Describe features of Natural Language Processing (NLP) workloads on Azure (25—30%)

### Identify features of common NLP Workload Scenarios

- identify features and uses for key phrase extraction
- identify features and uses for entity recognition
- identify features and uses for sentiment analysis
- identify features and uses for language modeling
- identify features and uses for speech recognition and synthesis
- identify features and uses for translation

### Identify Azure tools and services for NLP workloads

- identify capabilities of the Language service
- identify capabilities of the Speech service
- identify capabilities of the Translator service

### Identify considerations for conversational AI solutions on Azure

- identify features and uses for bots
- identify capabilities of the Azure Bot service

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*The table below shows the changes that were implemented on April 29, 2022 to the English language version of this exam. Following the comparison table, the previous study guide is included.*

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Old objective number	Subtask changes and new location
1.1 Identify features of common AI workloads	Revised subtasks
2.2 Describe core machine learning concepts	Revised subtasks
2.3 Identify core tasks in creating a machine learning solution	Deleted
2.4 Describe capabilities of no code machine learning with Azure Machine Learning Studio	Revised title and subtasks; new 2.3

4.2 Identify Azure tools and services for NLP workloads	Revised subtasks
5.1 Describe features of conversational AI workloads on Azure	Deleted: revised subtasks: moved to 4.3
5.2 Identify Azure services for conversational AI	Deleted; revised subtask: moved to 4.3

## Audience Profile

Candidates for this exam should have foundational knowledge of machine learning (ML) and artificial intelligence (AI) concepts and related Microsoft Azure services.

This exam is an opportunity to demonstrate knowledge of common ML and AI workloads and how to implement them on Azure.

This exam is intended for candidates with both technical and non-technical backgrounds. Data science and software engineering experience are not required; however, some general programming knowledge or experience would be beneficial.

Azure AI Fundamentals can be used to prepare for other Azure role-based certifications like Azure Data Scientist Associate or Azure AI Engineer Associate, but it is not a prerequisite for any of them.

## Skills Measured

NOTE: The bullets that follow each of the skills measured are intended to illustrate how we are assessing that skill. Related topics may not be covered in the exam.

NOTE: Most questions cover features that are general availability (GA). The exam may contain questions on Preview features if those features are commonly used.

## Describe Artificial Intelligence workloads and considerations (15—20%)

### Identify features of common AI workloads

- identify prediction/forecasting workloads
- identify features of anomaly detection workloads
- identify computer vision workloads
- identify natural language processing or knowledge mining workloads
- identify conversational AI workloads

### **Identify guiding principles for responsible AI**

- describe considerations for fairness in an AI solution
- describe considerations for reliability and safety in an AI solution
- describe considerations for privacy and security in an AI solution
- describe considerations for inclusiveness in an AI solution
- describe considerations for transparency in an AI solution
- describe considerations for accountability in an AI solution

## **Describe fundamental principles of machine learning on Azure (30—35%)**

### **Identify common machine learning types**

- identify regression machine learning scenarios
- identify classification machine learning scenarios
- identify clustering machine learning scenarios

### **Describe core machine learning concepts**

- identify features and labels in a dataset for machine learning
- describe how training and validation datasets are used in machine learning
- describe how machine learning algorithms are used for model training
- select and interpret model evaluation metrics for classification and regression

### **Identify core tasks in creating a machine learning solution**

- describe common features of data ingestion and preparation
- describe feature engineering and selection
- describe common features of model training and evaluation
- describe common features of model deployment and management

### **Describe capabilities of no-code machine learning with Azure Machine Learning studio**

- automated ML UI
- azure Machine Learning designer

## **Describe features of computer vision workloads on Azure (15—20%)**

### **Identify common types of computer vision solution:**

- identify features of image classification solutions

- identify features of object detection solutions
- identify features of optical character recognition solutions
- identify features of facial detection, facial recognition, and facial analysis solutions

#### **Identify Azure tools and services for computer vision tasks**

- identify capabilities of the Computer Vision service
- identify capabilities of the Custom Vision service
- identify capabilities of the Face service
- identify capabilities of the Form Recognizer service

### **Describe features of Natural Language Processing (NLP) workloads on Azure (15–20%)**

#### **Identify features of common NLP Workload Scenarios**

- identify features and uses for key phrase extraction
- identify features and uses for entity recognition
- identify features and uses for sentiment analysis
- identify features and uses for language modeling
- identify features and uses for speech recognition and synthesis
- identify features and uses for translation

#### **Identify Azure tools and services for NLP workloads**

- identify capabilities of the Text Analytics service
- identify capabilities of the Language Understanding service (LUIS)
- identify capabilities of the Speech service
- identify capabilities of the Translator Text service

### **Describe features of conversational AI workloads on Azure (15—20%)**

#### **Identify common use cases for conversational AI**

- identify features and uses for webchat bots
- identify common characteristics of conversational AI solutions

#### **Identify Azure services for conversational AI**

- identify capabilities of the QnA Maker service
- identify capabilities of the Azure Bot service