# Microsoft Azure AI Fundamentals (AI-900)

# Description

# Understanding the Fundamentals of Artificial Intelligence with Microsoft Azure

The AI-900 course is a unique opportunity to explore the basic concepts of Microsoft Azure AI. Designed for beginners, it helps you understand the fundamental principles of artificial intelligence and the Azure services that support them. This course provides a comprehensive perspective on modern technologies transforming industries, without requiring advanced expertise in programming or data science.

With a structured program and practical exercises, you will discover how AI can address current challenges in various sectors, such as healthcare, finance, and the environment. The educational modules introduce you to key concepts such as machine learning, computer vision, natural language processing, and other essential topics.

# The AI-900 Course: Practical and Accessible for Everyone

With AI-900, learn to create intelligent solutions while mastering the basics of Azure AI tools. This course goes beyond theory by offering hands-on exercises to strengthen your knowledge. It is designed for anyone interested in getting familiar with artificial intelligence, whether you are a novice or a professional.

#### Course Content Module 1: Basics of Al

- Understanding machine learning
- What is computer vision?
- Understanding natural language processing
- Understanding document intelligence and knowledge exploration
- Understanding generative AI
- Challenges and risks associated with artificial intelligence
- · Understanding what responsible AI is

# Module 2: Fundamentals of Machine Learning

- What is machine learning?
- Types of machine learning
- Regression
- Binary classification
- Multiclass classification
- Clustering
- Deep learning
- Introduction to Azure Machine Learning

#### Module 3: Basics of Azure Al Services

- Al services on the Azure platform
- Create Azure AI service resources

- Using Azure AI services
- Understanding authentication for Azure AI services

# Module 4: Fundamentals of Computer Vision

- Images and image processing
- Machine learning for computer vision
- Introduction to Azure AI Vision
- Analyze images in Vision Studio

# Module 5: Fundamentals of Facial Recognition

- Understanding facial analysis
- Getting started with facial analysis on Azure
- Detect faces in Vision Studio

# Module 6: Basics of Optical Character Recognition

- Getting started with Azure AI Vision
- Using Vision Studio on Azure
- Reading text in Vision Studio

# Module 7: Basics of Text Analysis with Language Services

- Understanding text analysis
- · Getting started with text analysis
- Analyze text using Language Studio

#### Module 8: Basics of Question Answering with Language Services

• Create a customized question-answering knowledge base

#### Module 9: Basics of Conversational Language Understanding

- Describing conversational language understanding
- Getting started with conversational language understanding in Azure
- Using conversational language understanding with Language Studio

# Module 10: Basics of Azure Al Speech

- Understanding speech recognition and synthesis
- Getting started with Speech in Azure
- Using Azure AI Speech

# Module 11: Basics of Translation

- Understanding translation concepts
- Understanding translation in Azure
- Getting started with translation in Azure
- Explore Azure AI Translator

#### Module 12: Basics of Azure AI Document Intelligence

• Exploring document intelligence features

- Understanding Azure AI Document Intelligence capabilities
- Extracting data in Document Intelligence Studio

# Module 13: Basics of Knowledge Exploration and Azure Al Search

- What is Azure AI Search?
- Identify the elements of a search solution
- Create an index in the Azure portal
- Query data in an Azure AI Search index
- Explore an index in Azure AI Search

# Lab / Exercises

• This course provides you with exclusive access to the official Microsoft lab, enabling you to practice your skills in a professional environment.

# Documentation

• Access to Microsoft Learn, Microsoft's online learning platform, offering interactive resources and educational content to deepen your knowledge and develop your technical skills.

#### Exam

• This course prepares you to the AI-900: Microsoft Azure AI Fundamentals exam.

# **Participant profiles**

- IT professionals looking to explore artificial intelligence.
- Project managers or business leaders exploring AI solutions.
- Beginner developers aiming to train in Azure AI.
- Students or self-learners curious about the basics of artificial intelligence.
- Technology consultants seeking to expand their skills.

# Prerequisites

- · Basic awareness of computing and internet concepts
- An interest in using Azure AI services
- Have basic knowledge of computing and the Internet.
- Understand simple mathematical graphs.
- Possess minimal familiarity with programming.
  Objectives
  - Discover the fundamental concepts of artificial intelligence.
  - Understand the basics of machine learning and its applications.
  - Explore Azure services to create AI solutions.
  - Learn how to use computer vision to extract information from images.
  - Understand natural language processing and its practical applications.
  - Familiarize yourself with the principles of responsible and ethical AI.
  - Identify relevant use cases for AI in various industries.
  - Develop a strong foundation to pursue advanced AI learning.

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