

Designing and Implementing an Azure AI Solution (AI-102)

Course Duration: 5 Days

Exam Reference: AI-102

Course Overview

This course is designed for developers who want to build, manage, and deploy AI solutions that leverage Azure Cognitive Services, Azure Cognitive Search, and Microsoft Bot Framework. Participants will gain hands-on experience designing and implementing AI solutions using Azure services for vision, language, speech, and decision-making applications.

Prerequisites

This course requires completion of one of the following:

- Knowledge of Microsoft Azure and basic cloud concepts
- Experience in at least one programming language such as Python or C#
- Understanding of REST APIs and JSON data structures

Course Objectives

- Design and implement AI solutions using Azure Cognitive Services
- Build, train, and deploy machine learning models using Azure resources
- Create conversational AI experiences with the Azure Bot Service and Bot Framework
- Implement computer vision, natural language processing, and speech solutions
- Integrate AI services securely and efficiently into existing applications



Contact Us



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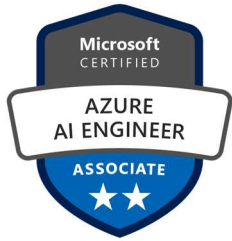
Course Outline

Module 1: Introduction to Azure AI Services

- Overview of Azure AI portfolio

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- Cognitive Services overview
- Understanding responsible AI principles

Module 2: Developing AI Apps with Cognitive Services

- Using SDKs and REST APIs
- Authentication and authorization with Cognitive Services
- Managing and monitoring Azure AI resources

Module 3: Implementing Computer Vision Solutions

- Analyzing images with the Computer Vision service
- Detecting and recognizing faces
- Implementing custom vision models

Module 4: Implementing Natural Language Processing Solutions

- Using Azure AI Language services
- Performing sentiment analysis, key phrase extraction, and translation
- Building custom text classification models

Module 5: Implementing Speech Solutions

- Speech-to-text and text-to-speech capabilities
- Translating spoken language
- Implementing speaker recognition

Module 6: Creating Conversational AI with Azure Bot Service

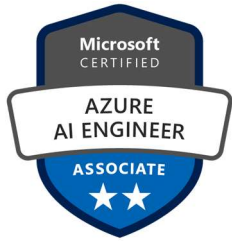
- Designing conversational flows
- Integrating Azure Cognitive Services with bots
- Deploying and testing bots with Azure Bot Framework Composer

Module 7: Implementing Knowledge Mining with Azure Cognitive Search

- Building intelligent search solutions
- Integrating AI enrichment into data sources
- Managing indexes and search performance

Module 8: Integrating AI Models and Services

- Combining multiple AI services in solutions
- Using Azure Machine Learning for custom models
- Managing AI pipelines and deployment



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Module 9: Monitoring, Security, and Compliance

- Implementing monitoring and diagnostics for AI services
- Ensuring data privacy and compliance
- Applying responsible AI principles in deployment