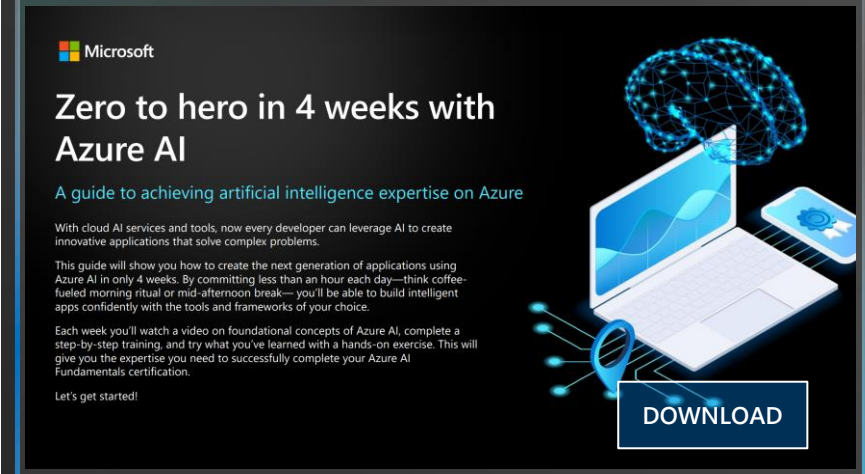
March 2023

Azure AI Engineer Learning Pathway

www.aka.ms/pathways

Getting started



Audience Profile

Software engineers concerned with building, managing and deploying AI solutions that leverage Azure Cognitive Services, Azure Cognitive Search, and Microsoft Bot Framework. They are familiar with C# or Python and have knowledge on using REST-based APIs to build computer vision, language analysis, knowledge mining, intelligent search, and conversational AI solutions on Azure.

Getting Started:

- New to the Cloud or Azure? Start with Azure Fundamentals
- New to AI on Azure? Check out our Azure AI Fundamentals certification
- Watch the Azure AI Essentials video series to get familiar with Azure AI products and services and learn how to bring these components together to build AI applications > HERE

Microsoft Learn:

- Build your Tech resilience
- Get started with artificial intelligence on Azure
- Microsoft AI Business School
- Microsoft Cognitive Services Blog
- Azure Developer Guide
- Responsible AI Principles
- Choose a bot-building tool
- Computer Vision
- Cognitive Service for Language
- Azure Cognitive Services
- Speech service documentation
- Anomaly Detector API Documentation

Additional Study

Cognitive Services

- What are Azure Cognitive Services?
- Quickstart: Create a Cognitive Services resource using the Azure portal
- Provision and manage Azure Cognitive Services
- Azure Cognitive Services – Privacy Policy
- Manage Cognitive Services keys
- Authenticate requests to Azure Cognitive Service

Computer Vision

- What is Computer Vision?
- Optical Character Recognition (OCR)
- What is the Ink Recognizer API?
- What is Form Recognizer?
- Cognitive Service Containers
- Process and classify images with the Azure Cognitive Vision Services
- Quickstart: Build a classifier with the Custom Vision website
- Quickstart: Build an object detector with the Custom Vision website
- Deploy a model to Azure Container Instances

Natural Language

- Process natural language with Azure Cognitive Language Services
- Process and Translate Speech with Azure Cognitive Speech Services
- What is the Translator service?
- How to extract key phrases using Text Analytics
- Sentiment analysis and Opinion Mining
- Tutorial: Extract structured data from user utterance with machine-learning entities in Language Understanding (LUIS)
- Train your active version of the LUIS app
- Test your LUIS app in the LUIS portal

Natural Language

- Batch testing with a set of example utterances
- Publish your active, trained app to a staging or production endpoint
- Deploy and run container on Azure Container Instance

Knowledge Mining

- Knowledge Mining Introduction
- Introduction to Azure Cognitive Search
- Implement knowledge mining with Azure Cognitive Search
- Creating search indexes in Azure Cognitive Search
- Create Indexer (Azure Cognitive Search REST API)
- Autocomplete and Suggestions
- Synonyms in Azure Cognitive Search
- Security overview for Azure Cognitive Search
- Scale for performance on Azure Cognitive Search
- Data import overview - Azure Cognitive Search

Conversational AI

- Create conversational AI solutions
- QnA Maker - Overview
- Create a new QnA Maker service
- Plan your QnA Maker app
- Migrate a knowledge base using export-import
- Create a bot with Azure Bot Service
- Dialogs library
- Create your own prompts to gather user input
- Bot Troubleshooting | Logging
- User authentication

Cognitive Services | Azure OpenAI Service

Role Based Certification

Azure AI Engineer

AI-102: Designing and Implementing a Microsoft Azure AI Solution

Skills Measured (AI-102)

Plan and manage an Azure AI solution (25–30%)
Implement image and video processing solutions (15–20%)
Implement natural language processing solutions (25–30%)
Implement knowledge mining solutions (5–10%)
Implement conversational AI solutions (15–20%)

Microsoft Learn:

- Prepare for AI engineering
- Provision and manage Azure Cognitive Services
- Process and translate text with Azure Cognitive Services
- Process and Translate Speech with Azure Cognitive Speech Services
- Create a Language Understanding solution
- Build a question answering solution
- Build custom text analytics solutions
- Create conversational AI solutions
- Create computer vision solutions with Azure Cognitive Services
- Extract text from images and documents
- Implement knowledge mining with Azure Cognitive Search

Exam Study Guide | Course Page | Practice Test | Exam Page

Azure Connected Learning Experience

Microsoft Azure Connected Learning Experience (CLX) is an experiential training program that sets a trajectory for aspiring learners and working professionals to be Azure experts. The CLX program offers a personalized journey that aims to optimize learning experience while maximizing return on time invested.

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