Azure AI Engineer (AI-102)

Build vision, language, search and generative AI solutions on Azure, aligned to the AI-102 exam.

DURATION	FORMAT	LEVEL	LABS
40 hours	Onsite, online or hybrid	Intermediate	Cloud sandbox included

About this programme

Prepares engineers to design and implement Azure AI solutions across computer vision, natural language, knowledge mining, Azure OpenAI and conversational bots, with the security, monitoring and responsible-AI practices covered by the AI-102 exam.

Who it is for: Software engineers and AI engineers building on Azure

What your team will be able to do

- Provision, secure and monitor Azure AI services, including in containers
- Implement image analysis, OCR, face and custom vision solutions
- Build text analytics, translation, speech and conversational language solutions
- Create knowledge mining solutions with Azure AI Search and Document Intelligence
- Build RAG and generative AI apps with Azure OpenAI, applying responsible AI

Before you start

- Working Python or C#
- Azure fundamentals: subscriptions, resource groups and the portal (AZ-900 level)

Course outline

1. Plan and manage an Azure AI solution

- Azure AI services: capabilities and use cases
- Creating resources with security, monitoring and cost management
- Microsoft's responsible AI principles in practice
- Deploying Azure AI services in containers

2. Computer vision

- Image analysis and object detection with Azure AI Vision
- Optical character recognition for images and documents
- Face detection, analysis and recognition
- Training and deploying custom image classification models
- Video analysis with Azure Video Indexer

3. Natural language processing

- Sentiment, key phrases, entities and language detection with Azure AI Language
- Question answering knowledge bases
- Speech-to-text, text-to-speech and real-time speech translation
- Conversational language understanding (CLU) models

4. Knowledge mining and information extraction

- Azure AI Search indexes, enrichment pipelines and knowledge stores
- Developing custom skills for Azure AI Search
- Extracting data from documents and forms with Document Intelligence

5. Generative AI with Azure OpenAI

- Deploying models, generating completions and tuning parameters
- Prompt engineering for natural language solutions
- Code generation, unit tests and image generation with DALL-E
- Retrieval augmented generation over your own data
- Responsible generative AI: harms, bias and mitigation

6. Conversational and agentic solutions

- Building intelligent bots with Azure AI Bot Service
- Adding language understanding and speech to bots

Sample schedule

5 days onsite, or 10 half-day sessions online. We fit days and session lengths to your team's calendar.

Day 1	8 h	Plan and manage an Azure AI solution; Computer vision
Day 2	8 h	Computer vision (continued)
Day 3	8 h	Natural language processing; Knowledge mining and information extraction
Day 4	8 h	Knowledge mining and information extraction (continued); Generative AI with Azure OpenAI
Day 5	8 h	Generative AI with Azure OpenAI (continued); Conversational and agentic solutions

Assessment and certification

How learning is checked

- A short knowledge check on day one and again at the end, so you can see each person's progress
- Graded hands-on labs in every module, reviewed by the trainer
- A final exercise that applies the programme to a problem like your team's own
- A timed practice exam in the format of the real one, with a review of every answer

Certificate and exams

- Participants who complete the programme receive a Cognitive Networks AI certificate of completion.
- Prepares your team for the Microsoft AI-102 exam. Exam vouchers are not included: each participant books the exam with Microsoft.

Formats and cohort size

- Onsite: At your office or a venue you choose, in full days.
- Online, live: Instructor-led over video, usually in half-day sessions so people can keep up with work.
- Hybrid: Some days in a room together, the rest online. Useful when a team works across cities.

Cohort size: 15 to 25 people per trainer. Larger teams run as parallel cohorts on the same outline, so everyone learns the same thing.

Pricing: We quote per cohort, based on duration, format and number of cohorts. There is no per-seat price list: tell us your team and we send a proposal within one business day.

Bring this programme to your team

Request a proposal at cognitivenetworks.ai/contact?programme=azure-ai-engineer

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