



AI Engineering Bootcamp

Build production-ready AI applications with LangChain, Azure and Claude Code.

Certificate Bootcamp | B05

Duration: 144 Hours

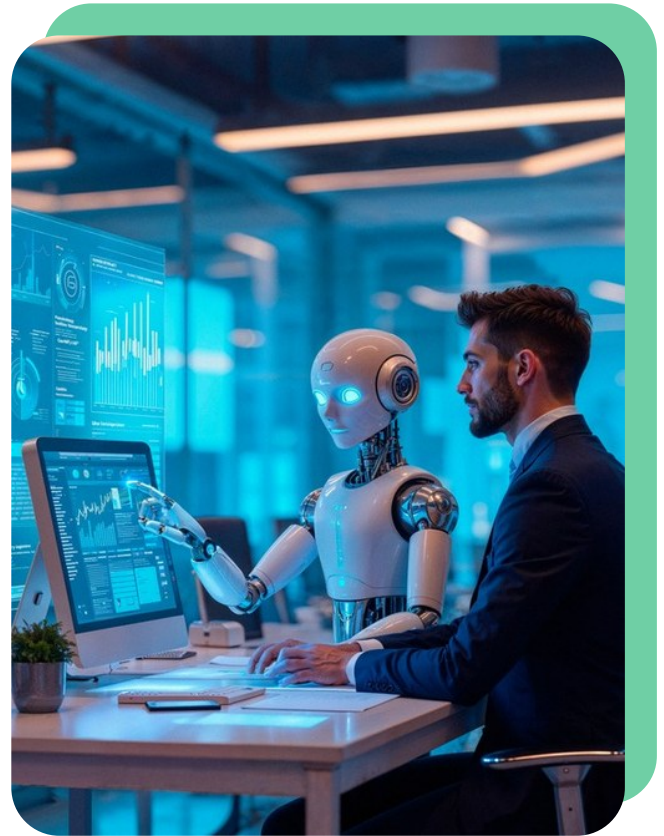
Level: Advanced



AMSTERDAM
DATA ACADEMY

WHAT YOU'LL LEARN

- Understand AI fundamentals: models, capabilities and limitations
- Build GenAI applications with LangChain: chains, agents, memory and tools
- Build and deploy AI models on Azure
- Program with AI using Claude Code inside real repositories
- Apply responsible AI: ethics, governance and the EU AI Act
- Deliver a production-worthy AI application end-to-end



COURSE CONTENT

Course 1: AI Fundamentals

- What AI is and the main model types
- How large language models work
- The AI tool landscape and applications per sector

Course 2: Building GenAI Apps with LangChain

- Chains, agents, memory and tools
- Connecting models to external data sources
- Building your own GenAI application

Course 3: Building AI Models on Azure

- Azure ML, Azure OpenAI and Cognitive Services
- Real-world cases of AI on Azure
- Build and deploy your own model for a use case

Course 4: Programming with AI (Claude Code)

- From prompting to context engineering with CLAUDE.md
- Spec-driven development with tests
- Reusable skills and MCP connections

Course 5: AI Literacy & Governance

- Where human judgment ends and algorithms take over
- Ethics, bias and transparency in practice
- Governance and the EU AI Act

Course 6: Final Assignment

- A production-worthy AI application end-to-end
- Code review, evaluation and documentation
- Demo day: present to industry professionals



AFTER THIS BOOTCAMP

You'll build and deploy AI agents, RAG applications and GenAI apps across the full stack, and use Claude Code and LangChain as professional AI development tools.

OFFICIAL CERTIFICATE

This bootcamp leads to an official ADA certificate at NLQF Level 6, comparable to bachelor level in the nationally recognised qualification framework. Your certificate proves a verified, professional level of knowledge and skills, valued by employers across the Netherlands.

Ready for your next step?

Book a free study-advice call

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