Operationalize machine learning and generative AI solutions (AI-300)

Duration: 4 Days Course Code: M-AI300

Overview:

AI-300 focuses on operationalizing machine learning and generative AI on Azure—covering MLOps, GenAIOps, automation, deployment, monitoring, and optimization of production AI systems.
This course covers building secure and scalable AI infrastructure, managing the full lifecycle of traditional machine learning models with Azure Machine Learning, and deploying, evaluating, monitoring, and optimizing generative AI applications and agents using Microsoft Foundry. Learners will gain hands-on knowledge of automation, continuous integration and delivery, infrastructure as code, and observability by using tools such as GitHub Actions, Azure CLI, and Bicep. The course emphasizes collaboration with data science and DevOps teams to deliver reliable, production-ready AI systems aligned with modern MLOps and GenAIOps best practices.
Updated August 2026

Company Events

These events can be delivered exclusively for your company at our locations or yours, specifically for your delegates and your needs. The Company Events can be tailored or standard course deliveries.

Target Audience:

This course is intended for data scientists, machine learning engineers, and DevOps professionals who want to design and operate production-grade AI solutions on Azure.
It is suited for learners with experience in Python, a foundational understanding of machine learning concepts, and basic familiarity with DevOps practices such as source control, CI/CD, and command-line tools, who are preparing to implement MLOps and GenAIOps workflows using Azure-native services.

Objectives:

- By the end of this course, learners will be able to:
- design,
- deploy,
- automate,
- monitor,
- optimize
- machine learning and generative AI solutions on Azure using MLOps and GenAIOps practices to deliver secure, scalable, and production-ready AI systems.

Prerequisites:

Basic understanding of machine learning concepts, Python programming, and familiarity with Azure Machine Learning and DevOps fundamentals is recommended.

Testing and Certification

This course prepares you for the “Operationalize Machine Learning and Generative AI Solutions” exam (Exam AI-300).

It enables you to earn the Microsoft certification: Associate Engineer in Machine Learning Operations (MLOps and GenAIOps) on the Azure platform.

Follow-on-Courses:

- M-AI103 Develop AI Apps and Agents on Azure to design GenAI applications and agent-based solutions
- M-AI500 Multi-Agent AI Solutions Expert to industrialize large-scale ecosystems of autonomous agents
- M-DP750 Azure Databricks Data Engineer Associate to master data pipelines focused on Big Data and AI
- M-AI200 Develop AI cloud solutions on Azure focused on the implementation and back-end architecture of

AI-powered cloud services

- M-SC500 Cloud and AI Security Engineer Associate to govern and secure environments and identities

Content:

Module 1: Operationalize machine learning models (MLOps)

- Experiment with Azure Machine Learning
- Perform hyperparameter tuning with Azure Machine Learning
- Run pipelines in Azure Machine Learning
- Trigger Azure Machine Learning jobs with GitHub Actions
- Trigger GitHub Actions with feature-based development
- Work with environments in GitHub Actions
- Deploy a model with GitHub Actions

Module 2:Operationalize generative AI applications (GenAIOps)

- Plan and prepare a GenAIOps solution
- Manage prompts for agents in Microsoft Foundry with GitHub
- Evaluate and optimize AI agents through structured experiments
- Automate AI evaluations with Microsoft Foundry and GitHub Actions
- Monitor your generative AI application

Analyze and debug your generative AI app with tracing

Additional Information:

Official course book provided to participants

Further Information:

For More information, or to book your course, please call us on Head Office Tel.: +974 40316639

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