AI-300T00: Operationalize machine learning and generative AI solutions

Category: AI, Data & Analytics | **Vendor:** Microsoft Technical

Duration: 32.00 hours (4 days) **26.0 CPD Hours** **Rating:** ⭐ 4.6 (5,878 reviews)

Course Information

Delivery Format:	Instructor Led - Online
Certification:	Microsoft Certified: Azure AI Engineer Associate
Related Exam:	AI-300

Course Overview

This course prepares learners to design, implement, and operate Machine Learning Operations (MLOps) and Generative AI Operations (GenAIOps) solutions on Azure. It 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.

About This Course

This course prepares learners to design, implement, and operate Machine Learning Operations (MLOps) and Generative AI Operations (GenAIOps) solutions on Azure. It 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.

Who Should Attend

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.

Detailed Course Outline

1 - Experiment with Azure Machine Learning

- Preprocess data and configure featurization
- Run an automated machine learning experiment
- Evaluate and compare models
- Configure MLflow for model tracking in notebooks
- Train and track models in notebooks
- Evaluate models with the Responsible AI dashboard
- Module assessment

2 - Perform hyperparameter tuning with Azure Machine Learning

- Define a search space
- Configure a sampling method
- Configure early termination
- Use a sweep job for hyperparameter tuning
- Module assessment

3 - Run pipelines in Azure Machine Learning

- Create components
- Create a pipeline
- Run a pipeline job
- Module assessment

4 - Trigger Azure Machine Learning jobs with GitHub Actions

- Understand the business problem
- Explore the solution architecture
- Use GitHub Actions for model training
- Module assessment

5 - Trigger GitHub Actions with feature-based development

- Understand the business problem
- Explore the solution architecture
- Trigger a workflow
- Module assessment

6 - Work with environments in GitHub Actions

- Understand the business problem
- Explore the solution architecture
- Set up environments
- Module assessment

7 - Deploy a model with GitHub Actions

- Understand the business problem
- Explore the solution architecture
- Model deployment
- Module assessment

8 - Plan and prepare a GenAIOps solution

- Explore use cases for GenAIOps
- Select the right generative AI model
- Understand the development lifecycle of a language model application
- Explore available tools and frameworks to implement GenAIOps
- Module assessment

9 - Manage prompts for agents in Microsoft Foundry with GitHub

- Apply version control to prompts
- Understand Microsoft Foundry agents and prompt versioning
- Organize prompts in GitHub repositories
- Develop safe prompt deployment workflows

10 - Evaluate and optimize AI agents through structured experiments

- Design evaluation experiments
- Apply Git-based workflows to optimization experiments
- Apply evaluation rubrics for consistent scoring

11 - Automate AI evaluations with Microsoft Foundry and GitHub Actions

- Understand why automated evaluations matter
- Align evaluators with human criteria
- Create evaluation datasets
- Implement batch evaluations with Python
- Integrate evaluations into GitHub Actions

12 - Monitor your generative AI application

- Why do you need to monitor?
- Understand key metrics to monitor
- Explore how to monitor with Azure
- Integrate monitoring into your app
- Interpret monitoring results

13 - Analyze and debug your generative AI app with tracing

- Why do you need to use tracing?
- Identify what to trace in generative AI applications
- Implement tracing in generative AI applications
- Debug complex workflows with advanced tracing patterns
- Make informed decisions with trace data analysis

Certification Path

Microsoft Certified: Azure AI Engineer Associate

Exam: AI-300

Upcoming Schedule

Available training dates for AI-300T00: Operationalize machine learning and generative AI solutions:

Start Date	End Date	Location	Delivery	Price
18 Jan 2027	21 Jan 2027	Online	Virtual	€2,495.00
18 Jan 2027	21 Jan 2027	Online	Virtual	€2,495.00

Frequently Asked Questions

Q: What delivery options are available for AI-300T00: Operationalize machine learning and generative AI solutions?

We offer multiple delivery formats:

- Live Instructor-Led Classroom Online (Virtual/Live Online)
- Traditional Instructor-Led Classroom Training (ILT)
- On-site delivery at your offices anywhere in United Kingdom
- Private dedicated courses customized for your team

Q: What certification does this course prepare me for?

The AI-300T00: Operationalize machine learning and generative AI solutions course helps prepare you for the Microsoft Certified: Azure AI Engineer Associate certification path.

Q: Which exam does this course prepare me for?

This course prepares you for the AI-300 official exam. You can take this exam at any exam center across United Kingdom including London, Manchester, Birmingham, Edinburgh, or live online wherever you are located.

Q: How many CPD hours does this course provide?

The 4-day AI-300T00: Operationalize machine learning and generative AI solutions course provides up to 26.0 CPD hours of structured learning. CPD certificates can be provided upon request.

Q: What is the duration of the AI-300T00: Operationalize machine learning and generative AI solutions training?

The training takes place over 4 day(s), with each day lasting approximately 32.00 hours including breaks for lunch and refreshments.

Q: Do you provide corporate training for AI-300T00: Operationalize machine learning and generative AI solutions?

Yes, we provide corporate training, dedicated training, and closed classes for AI-300T00: Operationalize machine learning and generative AI solutions. Training can take place anywhere in United Kingdom including London, Manchester, Birmingham, Edinburgh, or live online allowing teams from across United Kingdom or internationally to attend.

Q: What related terms do people search for?

Popular related searches include: AI-300T00: Operationalize machine learning and generative AI solutions, Microsoft, vILT, AI-300T00

Q: Why choose Nexus Human for AI-300T00: Operationalize machine learning and generative AI solutions?

Nexus Human is recognized as one of the leading training providers. Our trainers have won multiple awards including:

- Small Firms Best Trainer Award
- National Training Partner of the Year (Ireland) - Multiple Years
- Global Top 30 Instructor Awards (2012, 2019, 2021)
- Tech Excellence Award Nominations
- Learning Performance Institute (LPI) External Training Provider Sponsor 2024

Q: Are there any discount codes available?

Yes! Use discount code **PENPAL5** when booking your AI-300T00: Operationalize machine learning and generative AI solutions training. Please note that only one discount code can be used per booking and cannot be combined with other special offers.

Nexus Human

Professional Training & Development

Email: info@nexushuman.com

Website: www.nexushuman.com

Phone: +353 1 889 8700 (Ireland) | +44 20 8142 8961 (UK)

© 2026 Nexus Human. All rights reserved. This brochure was generated on 19/10/2026.