Generative AI in Production

Category: AI, Data & Analytics | **Vendor:** Google Cloud

Duration: 8.00 hours (1 days) **6.5 CPD Hours** **Rating:** ⭐ 4.6 (5,878 reviews)

Course Information

Delivery Format: Instructor Led - Online

Course Overview

Traditional MLOps is a set of practices to productionize traditional ML systems for enterprise applications. Generative AI raises new challenges in managing and productionizing applications at scale. The field of generative AI operations seeks to address these new challenges. In this course, you learn about the challenges that arise when deploying and productionizing generative AI-powered applications. You learn how to secure your generative AI-powered applications. Finally, you will discuss best practices for logging and monitoring your generative AI-powered applications in production.

About This Course

Traditional MLOps is a set of practices to productionize traditional ML systems for enterprise applications. Generative AI raises new challenges in managing and productionizing applications at scale. The field of generative AI operations seeks to address these new challenges. In this course, you learn about the challenges that arise when deploying and productionizing generative AI-powered applications. You learn how to secure your generative AI-powered applications. Finally, you will discuss best practices for logging and monitoring your generative AI-powered applications in production.

Who Should Attend

Developers, DevOps Engineers, and Machine Learning Engineers

Prerequisites & Entry Requirements

General Prerequisites:

Before attending this course, students should have attended the Application Development with LLMs on Google Cloud course

Learning Outcomes

Upon successful completion of this course, participants will be able to:

Understand the challenges in productionizing applications using generative AI Manage experimentation and evaluation for LLM-powered application Productionize LLM-powered applications Secure generative AI applications Implement logging and monitoring for LLM-powered applications

Detailed Course Outline

- Introduction to GenAI in Production
- GenAI Application Deployment
- Productionizing GenAI
- Securing GenAI Applications
- Observability for Production LLM Systems

, Module 1 - Introduction to Generative AI in Production

Topics:

- Generative AI Operations
- Traditional MLOps vs. GenAIOps
- Components of an LLM System
- RAG/ReAct architecture

Objectives:

- Understand generative AI operations
- Compare traditional MLOps and GenAIOps

- Analyze the components of an LLM system

- Define and compare RAG and ReAct

Module 2 - Generative AI Application Deployment

Topics:

- Application deployment options

- Deployment, packaging, and versioning

Objectives:

- Evaluate application deployment options

- Deploy, package, and version apps

Activities:

- Lab: Deploying an Agentic Application on Cloud Run

Module 3 - Productionizing Generative AI

Topics:

- Maintenance and updates

- Testing and evaluation

- CI/CD pipelines for gen AI-powered apps

Objectives:

- Maintain and update LLM models
- Test and evaluate gen AI-powered apps
- Deploy CI/CD pipelines for gen AI-powered apps

Activities:

- Lab: Tracking Versions of Generative AI Applications

Module 4 - Securing Generative AI Applications

Topics:

- Security challenges
- Prompt security
- Sensitive Data Protection and DLP API
- Model Armor

Objectives:

- Identify security challenges for gen AI applications
- Understand prompt security issues
- Apply sensitive data protection and DLP API
- Implement Model Armor

Activities:

- Lab: Securing Generative AI-Powered Applications

Module 5 - Observability for Production LLM Systems

Topics:

- Cloud Operations
- Cloud Logging
- Monitoring
- Cloud Trace
- Agent Analytics and AgentOps
- Putting it all together

Objectives:

- Describe the purpose and capabilities of Google Cloud Observability
- Explain the purpose of Cloud Monitoring
- Explain the purpose of Cloud Logging
- Explain the purpose of Cloud Trace

Activities:

- Lab: Logging, Monitoring, and Agent Analytics

Skills You Will Learn:

- Understand the challenges in productionizing applications using generative AI
- Manage experimentation and evaluation for LLM-powered application
- Productionize LLM-powered applications
- Secure generative AI applications
- Implement logging and monitoring for LLM-powered applications

Frequently Asked Questions

Q: What delivery options are available for Generative AI in Production?

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: How many CPD hours does this course provide?

The 1-day Generative AI in Production course provides up to 6.5 CPD hours of structured learning. CPD certificates can be provided upon request.

Q: What is the duration of the Generative AI in Production training?

The training takes place over 1 day(s), with each day lasting approximately 8.00 hours including breaks for lunch and refreshments.

Q: Do you provide corporate training for Generative AI in Production?

Yes, we provide corporate training, dedicated training, and closed classes for Generative AI in Production. 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: Generative AI in Production, AI & Data Science, GAIP, Google Cloud, vILT

Q: Why choose Nexus Human for Generative AI in Production?

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 Generative AI in Production 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)

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