

Introduction to AI and Machine Learning on Google Cloud

Duration: 08 hours (1 day)

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Course Outcomes

1. Master AI and ML Technologies
2. Data Preparation
3. Model Development
4. Generative AI
5. AI Development Workflow

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Module 01: AI Foundations

- This module begins with a use case demonstrating the AI capabilities. It then focuses on the AI foundations including cloud infrastructure like compute and storage. It also explains the primary data and AI development products on Google Cloud. Finally, it demonstrates how to use BigQuery ML to build an ML model, which helps transition from data to AI.

Module 02: AI Development Options

- This module explores the various options for developing an ML project on Google Cloud, from ready-made solutions like pre-trained APIs, to no-code and low-code solutions like AutoML, and code-based solutions like custom training. It compares the advantages and disadvantages of each option to help decide the right development tools.

Module 03: AI Development Workflow

- This module walks through the ML workflow from data preparation, to model development, and to model serving on Vertex AI. It also illustrates how to convert the workflow into an automated pipeline using Vertex AI Pipelines.

Module 04: Generative AI

- This module introduces generative AI (gen AI), the newest advancement in AI, and the essential toolkits for developing gen AI projects. It starts by examining the gen AI workflow on Google Cloud. It then investigates how to use Gen AI Studio and Model Garden to access Gemini multimodal, design prompt, and tune models. Finally, it explores the built-in gen AI capabilities of AI solutions.

