Introduction to AI and Machine Learning on Google Cloud

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

This course introduces Google Cloud's AI and machine learning (ML) capabilities, with a focus on developing both generative and predictive AIprojects. It explores the various technologies, products, and tools available throughout the data-to-AI lifecycle, empowering data scientists, AI developers, and ML engineers to enhance their expertise through interactive exercises.

About This Course

- Introduction
- AI foundations
- Generative AI
- AI development options
- AI development worklow
- Summary

Who Should Attend

Data scientists, AI developers, ML engineers

Prerequisites & Entry Requirements

General Prerequisites:

- Basic knowledge of machine learning concepts
- Prior experience with programming languages such as SQL and Python

Learning Outcomes

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

- Recognize the data-to-AI technologies and tools provided by Google Cloud.
- Build generative AI projects by using Gemini multimodal, efficient prompts, and AI agent builders.
- Choose between different Google Cloud product options to develop an AI project.
- Create an ML model from end-to-end by using Vertex AI.

Detailed Course Outline

Introduction

This lesson guides learners through the course structure, which is built upon a three-layer AI framework: AI infrastructure, development, and solutions. It outlines the learning objectives and introduces learners to Google's comprehensive suite of full-stack AI development tools.

- Define the course objectives.
- Recognize the course structure.

AI foundations

This module begins with a use case demonstrating the AI capabilities. It then focuses on the AI 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.

- Recognize the AI/ML framework on Google Cloud.
- Identify the major components of AI infrastructure.
- Define the data and ML products on Google Cloud and how they support the data-to-AI lifecycle.
- Build an ML model with BigQuery ML to bring data to AI.

Generative AI

This module introduces generative AI (gen AI), the latest AI advancement, and the Google Cloud toolkits for developing gen AI projects. It starts by examining the foundation models. It then investigates the prompt-to-production lifecycle with VertexAI Studio, including prompt engineering, app deployment, and model tuning.Additionally, this module explores AI agents and Google’s full stack of AI agent development tools.

- Define generative AI and foundation models.
- Recognize the prompt-to-production lifecycle and its associated tools.
- Define AI agents and their core components.
- Identify Google Cloud tools and technologies for building AI agents.

AI development options

This module explores the various options for developing an AI project on GoogleCloud, 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.

- Define different options to build an ML model with Vertex AI on Google Cloud.
- Identify the features and use cases of pre-trained APIs, AutoML, and custom training.
- Use the Natural Language API to analyze text.

AI development worklow

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.

- Define the workflow of building an ML model.

- Describe MLOps and workflow automation on Google Cloud.

- Build an ML model from end to end by using AutoML with Vertex AI.

Summary

This lesson summarizes the course by addressing the most important concepts, tools, technologies, and products for each module.

- Recognize the primary concepts, and products learned in the course., Course Introduction, AI Foundations, AI Development Options, AI Development Workflow, Generative AI

Skills You Will Learn:

- Recognize the data-to-AI technologies and tools provided by Google Cloud.
- Build generative AI projects by using Gemini multimodal, efficient prompts, and AI agent builders.
- Choose between different Google Cloud product options to develop an AI project.
- Create an ML model from end-to-end by using Vertex AI.

Frequently Asked Questions

Q: What delivery options are available for Introduction to AI and Machine Learning on Google Cloud?

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 Introduction to AI and Machine Learning on Google Cloud 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 Introduction to AI and Machine Learning on Google Cloud 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 Introduction to AI and Machine Learning on Google Cloud?

Yes, we provide corporate training, dedicated training, and closed classes for Introduction to AI and Machine Learning on Google Cloud. 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: Introduction to AI and Machine Learning on Google Cloud, AI & Data Science, AIMLGC, Google Cloud, vILT

Q: Why choose Nexus Human for Introduction to AI and Machine Learning on Google Cloud?

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 Introduction to AI and Machine Learning on Google Cloud training. Please note that only one discount code can be used per booking and cannot be combined with other special offers.

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