Introduction to AI and Machine Learning on Google Cloud

Duration: 1 Day Course Code: GO9095 Delivery Method: Virtual Learning

Overview:

This course introduces the AI and machine learning (ML) offerings on Google Cloud that build both predictive and generative AI projects.

It explores the technologies, products, and tools available throughout the data-to-AI life cycle, encompassing AI foundations, development, and solutions.It aims to help data scientists, AI developers, and ML engineers enhance their skills and knowledge through engaging learning experiences and practical hands-on exercises.

Products:
- Gemini multimodal
- Gemini Enterprise
- NotebookLM
- BigQuery ML
- Vertex AI, Vertex AI Studio, Vertex AI Agent Builder, Vertex AI Pipelines
- Natural Language API
- AutoML

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Virtual Learning

This interactive training can be taken from any location, your office or home and is delivered by a trainer. This training does not have any delegates in the class with the instructor, since all delegates are virtually connected. Virtual delegates do not travel to this course, Global Knowledge will send you all the information needed before the start of the course and you can test the logins.

Target Audience:

- AI developers, data scientists, and ML engineers

Objectives:

- **After this course participants should 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 model tuning.
- Explore various options for developing an AI project on Google Cloud.
- Create an ML model from end-to-end by using Vertex AI.

Prerequisites:

Having one or more of the following:

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

Testing and Certification

None

Follow-on-Courses:

No recommendation

Content:

Module 0: Course Introduction

- Define the course objectives.
- Recognize the course structure

Module 1: AI Foundations

- 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.
- Lab: Predict Visitor Purchases with BigQuery ML

Module 2: Generative AI

- 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.
- Lab: Get started with Vertex AI Studio

Module 3: AI Development Options

- 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.
- Lab: Entity and Sentiment Analysis with Natural Language API

Module 4: AI Development Workflow

- 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.
- Lab: Vertex AI: Predict Loan Risk with AutoML

Module 5: Course Summary

- Recognize the primary concepts, tools, technologies, and products learned in the course.

Additional Information:

Official course book provided to participants

Further Information:

For More information, or to book your course, please call us on 0800/84.009

info@globalknowledge.be

www.globalknowledge.com/en-be/