

# Introduction to Developer Efficiency on Google Cloud

7h

## What you'll learn

- Understand the efficiency challenges in a developer workflow and how generative AI can make developers more efficient.
- Use Duet AI in Cloud Code to more efficiently write code for your applications.
- Use Duet AI in Google Cloud to quickly summarize your application logs.
- Explain the fundamentals of prompt design when using Duet AI in Cloud Code.
- Integrate the PaLM API in your applications to use generative AI.
- Explore available models available in Vertex AI Model Garden

## Target audience

Customers interested in how generative AI can be used to make developers more efficient at writing code and implementing new features into applications.

## Prerequisites

[Google Cloud Fundamentals: Core Infrastructure](#) or equivalent Google Cloud experience.

## Course Outline

## Module 01: Developer Efficiency on Google Cloud

### Topics

- Developer workflows and efficiency challenges
- Developer efficiency on Google Cloud
- AI-powered developer tools on Google Cloud
- Developer workflows with LLMs

### Objectives

- Describe efficiency challenges that developers face.
- Understand how AI-powered tools on Google Cloud can improve developer efficiency.
- Describe developer workflows when using large language models (LLMs).

## Module 02: Using Duet AI Throughout the Development Lifecycle

### Topics

- Introduction to Duet AI
- Cloud Code and Duet AI
- Generating and completing code by using Duet AI
- Understanding logs using Duet AI

### Objectives

- Use Duet AI in Cloud Code to more efficiently write code for your applications.
- Use Duet AI in Google Cloud to quickly summarize your application logs.

### Activities

- Lab: Using Duet AI Throughout the Software Development Lifecycle

## Module 03: Prompt Design for Duet AI

- Why prompt design is important
- General prompt design tips
- Prompt design for Duet AI

### Objectives

- Explain the fundamentals of prompt design when using Duet AI in Cloud Code.

### Activities

- Lab: Prompt Design for Duet AI in Cloud Code

## **Module 04: Leveraging Codey in Developer Workflows**

### Topics

- Vertex AI PaLM API
- Code generation and completion with Codey
- Vertex AI Studio
- Using the Codey API in your code
- Fine-tuning Codey for specific use cases

### Objectives

- Use the Vertex AI PaLM API and Codey for code generation
- Integrate Codey into applications by using the API
- Fine-tune Codey for specific use cases

### Activities

- Lab: Leveraging Codey in Your Applications

## **Module 05: Discovering Model APIs using Vertex AI Model Garden**

### Topics

- Vertex AI Model Garden • Models types and solutions
- Model Registry and model deployment
- Fine-tuning models

### Objectives

- Understand the role of Vertex AI Model Garden.
- Explore models available in Vertex AI Model Garden

### Activities

- Lab: Exploring Vertex AI Model Garden