

TRAINING GOALS:

This course demonstrates how to use AI/ML models for generative AI tasks in BigQuery. Through a practical use case involving customer relationship management, you learn the workflow of solving a business problem with Gemini models. To facilitate comprehension, the course also provides step-by-step guidance through coding solutions using both SQL queries and Python notebooks.

What you'll learn

- Define the features of Gemini in BigQuery that aid the data-to-AI pipeline.
- Explore data with Insights and Table Explorer.
- Develop code with Gemini assistance.
- Discover and visualize workflow with data canvas.
- Explain the workflow of using AI/ML models for predictive and generative tasks in BigQuery.
- Create a solution for leveraging Gemini models in BigQuery with SQL queries and Jupyter Notebooks.

Audience

This course is intended for: data analysts, data engineers, and other data professionals who wish to use Gemini in BigQuery to boost productivity and understand their unstructured data.

Products

- Gemini
- BigQuery
- Vertex AI

CONSPECT:

- Gemini on BigQuery

- Topics
 - Gemini on Google Cloud
 - Overview of Gemini on BigQuery
 - Introduction to course use case
- Objectives
 - Understand capabilities of Gemini on Google Cloud.
 - Understand capabilities of Gemini on BigQuery.
- Data Exploration and Preparation
 - Topics
 - Data exploration and preparation
 - Insights
 - Table Explorer
 - Objectives
 - Discover tools that support data exploration.
 - Identify the benefits and restrictions of Insights and Table Explorer.
 - Explore data cleaning and pipeline development features in BigQuery.
 - Activities
 - Lab: Explore Data with Gemini in BigQuery
- Code Development with Gemini
 - Topics
 - Gemini for writing code
 - Troubleshooting and testing with Gemini
 - Prompting best practices
 - Objectives
 - Explore using Gemini for writing code.
 - Identify how Gemini can assist with troubleshooting.
 - Discover prompting best practices.
 - Activities
 - Lab: Develop Code with Gemini in BigQuery
- Data Canvas
 - Topics
 - Introduction to Data Canvas
 - Data Canvas capabilities
 - Prompting best practices for Data Canvas
 - Objectives
 - Explore Data Canvas features.

- Discover prompting best practices for Data Canvas.
- Activities
 - Lab: Use Data Canvas to Visualize and Design Queries
- Working with Gemini Models in BigQuery
 - Topics
 - BigQuery ML
 - Using Gemini in your SQL queries
 - Gemini in BigQuery Notebooks
 - Objectives
 - Discover the capabilities of BigQuery ML.
 - Explore using Gemini in your SQL queries.
 - Explore using Gemini in Jupyter Notebooks.
 - Activities
 - Lab: Analyze Customer Reviews with SQL
 - Lab: Analyze Customer Reviews with Python Notebooks

REQUIREMENTS:

- Prior experience with programming languages including SQL and/or Python.
- Basic knowledge of ML and generative AI.

Difficulty level



CERTIFICATE:

The participants will obtain certificates signed by Google Cloud (course completion).

TRAINER:

Authorized Google Cloud Trainer