Gemini in BigQuery for Data Practitioners Training

Duration: **1 Day**

BILGINC IT Academy
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This course provides practical guidance on using **AI and machine learning models in BigQuery** to perform generative AI tasks.

Participants work through a practical customer relationship management use case, following a step-by-step approach to developing solutions with **SQL queries and Python notebooks**. Throughout the course, learners explore Gemini capabilities within BigQuery across data exploration, preparation, code development, and AI/ML workflows.

The programme is designed to help data professionals understand how **Gemini models can be used within BigQuery to address practical business problems** and support more productive data workflows.

Prerequisites

Participants should have:

- Previous programming experience with SQL and/or Python
- Basic knowledge of machine learning
- A foundational understanding of generative AI concepts

Who Should Attend

This course is suitable for:

- Data analysts
- Data engineers
- Other data professionals who want to improve productivity using Gemini in BigQuery
- Data practitioners looking to gain greater insight from unstructured data

What You Will Learn

By the end of the course, participants will be able to:

- Describe the Gemini in BigQuery features that support the data-to-AI pipeline
- Explore data using Insights and Table Explorer
- Develop code with assistance from Gemini
- Discover and visualise workflows using Data Canvas
- Explain the workflow for applying AI and machine learning models to predictive and generative tasks in BigQuery
- Build solutions that use Gemini models in BigQuery through SQL queries and Jupyter Notebooks

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Training Outline

1. Gemini in BigQuery

This module introduces Gemini and examines its role within Google Cloud and BigQuery.

- Overview of Gemini on Google Cloud
- Introduction to Gemini in BigQuery
- Introduction to the course use case
- Capabilities of Gemini across Google Cloud and BigQuery

2. Data Exploration and Preparation

This section explores the tools available for understanding and preparing data in BigQuery.

- Data exploration and preparation tools
- Working with Insights
- Using Table Explorer
- Benefits of Insights and Table Explorer
- Restrictions and considerations associated with these features
- Data cleaning capabilities in BigQuery
- Data pipeline development features

3. Code Development with Gemini

This module focuses on using Gemini to support common code development activities.

- Writing code with Gemini assistance
- Using AI assistance during development
- Troubleshooting with Gemini
- Testing with Gemini
- Prompting best practices

4. Data Canvas

This section introduces **Data Canvas** and explores how it can support workflow discovery and visualisation.

- Introduction to Data Canvas
- Core Data Canvas capabilities
- Discovering workflows
- Visualising workflows
- Prompting best practices for Data Canvas

5. Working with Gemini Models in BigQuery

The final module explores how Gemini models can be incorporated into BigQuery workflows using its AI and machine learning capabilities.

- BigQuery ML capabilities
- Using Gemini within SQL queries
- Working with Gemini models through Jupyter Notebooks

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- Applying AI and machine learning workflows to predictive and generative tasks