Training: Google Cloud
BigQuery for Data Analysts

Google Cloud

TRAINING GOALS:

This course is designed for data analysts who want to learn about using BigQuery for their data analysis needs. Through a combination of videos, labs, and demos, we cover various topics that discuss how to ingest, transform, and query your data in BigQuery to derive insights that can help in business decision-making.

What you'll learn

- Learn the purpose and value of BigQuery, Google Cloud’s enterprise data warehouse, and discuss its data analytics features.
- Analyze large datasets in BigQuery with SQL.
- Clean and transform your data in BigQuery with SQL.
- Ingest new BigQuery datasets, and discuss options for external data sources.
- Review visualization principles, and use Connected Sheets and Looker Studio to visualize data insights from BigQuery.
- Use Dataform to develop scalable data transformation pipelines in BigQuery.
- Use new integrations and assistive capabilities introduced with BigQuery Studio.

Audience

This course is for:

- Data analysts who want to learn how to use BigQuery for their data analysis needs.

Products

- BigQuery

CONSPECT:

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- BigQuery for data analysts
  - Topics
    - Overview
    - Data analytics on Google Cloud
    - From data to insights with BigQuery
    - Real-world use cases of companies transformed through analytics on Google Cloud
  - Objectives
    - Identify analytics challenges faced by data analysts, and compare big data on-premises versus in the cloud.
    - Learn the purpose and value of BigQuery, Google Cloud's enterprise data warehouse, and discuss its data analytics features.
- Exploring and preparing your data with BigQuery
  - Topics
    - Overview
    - Common data exploration techniques
    - Analysis of large datasets with BigQuery
    - Query basics
    - Working with functions
    - Enriching your queries with UNIONs and JOINs
  - Objectives
    - List common data exploration techniques.
    - Review SQL query basics.
    - Enrich queries with functions, unions, and joins.
  - Activities
    - Lab: Exploring an Ecommerce Dataset using SQL in Google BigQuery
    - Lab: Troubleshooting Common SQL Errors with BigQuery
    - Lab: Troubleshooting and Solving Data Join Pitfalls
- Cleaning and transforming your data
  - Topics
    - Overview
    - Five principles of dataset integrity
    - Clean and transform data using SQL
    - Clean and transform data: Other options
  - Objectives
    - Identify what makes a good dataset.
    - Clean and transform data using SQL.
    - Clean and transform data with other options.

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- Ingesting and storing new BigQuery datasets
  - Topics
    - Overview
    - Permanent versus temporary data tables
    - Ingesting new datasets
    - External data sources
  - Objectives
    - Review differences between permanent and temporary data tables.
    - Ingest and store new BigQuery datasets.
    - Discuss options for external data sources.
  - Activities
    - Lab: Creating New Permanent Tables
    - Lab: Ingesting and Querying New Datasets
- Visualizing your insights from BigQuery
  - Topics
    - Overview
    - Data visualization principles
    - Connected Sheets
    - Common data visualization pitfalls
    - Looker Studio
    - Analysis in a notebook
  - Objectives
    - Review data visualization principles and common visualization pitfalls.
    - Use Connected Sheets and Looker Studio to visualize data insights from BigQuery.
    - Discuss running analyses in a Jupyter Notebook.
  - Activities
    - Lab: Connected Sheets Qwik Start
    - Lab: Explore and Create Reports with Looker Studio
- Developing scalable data transformation pipelines in BigQuery with Dataform
  - Topics
    - Overview
    - What is Dataform?
    - Getting started with Dataform
  - Objectives
    - Use Dataform to develop scalable data transformation pipelines in BigQuery.
    - Learn how to get started with Dataform by creating a repository and development workspace.

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- Create and execute a SQL workflow in Dataform.
- Activities
  - Demo
  - Lab: Create and Execute a SQL Workflow in Dataform
- BigQuery Studio
  - Topics
    - BigQuery Studio: What and why?
    - Unified analytics
    - Asset management
    - Embedded assistance
  - Objectives
    - Introduce BigQuery Studio.
    - Use Duet AI in BigQuery to explain and generate SQL queries.
    - Learn about new usability features and integrations with Dataform and Dataplex in the new BigQuery Studio interface.
  - Activities
    - Demo
    - Lab: Analyze Data with Duet AI Assistance
    - Lab: Generate Personalized Email Content with BigQuery Continuous Queries and Gemini
- Summary
  - Topics
    - Summary
  - Objectives
    - Summarize the key topics covered in the course.

REQUIREMENTS:

Introduction to Data Analytics on Google Cloud.

Difficulty level



CERTIFICATE:

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

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TRAINER:

Authorized Google Cloud Trainer

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