Training: Google Cloud
From Data to Insights with Google Cloud Platform

Google Cloud

TRANING TERMS

2025-09-10 | 3 days | Warszawa / Virtual Classroom

TRAINING GOALS:

Want to know how to query and process petabytes of data in seconds? Curious about data analysis that scales automatically as your data grows? Welcome to the Data Insights course! This four-course accelerated online specialization teaches course participants how to derive insights through data analysis and visualization using the Google Cloud Platform. The courses feature interactive scenarios and hands-on labs where participants explore, mine, load, visualize, and extract insights from diverse Google BigQuery datasets. The courses also cover data loading, querying, schema modeling, optimizing performance, query pricing, and data visualization. This specialization is intended for the following participants: Data Analysts, Business Analysts, Business Intelligence professionals Cloud Data Engineers who will be partnering with Data Analysts to build scalable data solutions on Google Cloud Platform To get the most out of this specialization, we recommend participants have some proficiency with ANSI SQL.

Audience:

Data Analysts, Business Analysts, Business Intelligence professionals Cloud Data Engineers who will be partnering with Data Analysts to build scalable data solutions on Google Cloud Platform.

The course includes presentations, demonstrations, and hands-on labs.

CONSPECT:

- Intro to Google Cloud Platform
  - Highlight Analytics Challenges Faced by Data Analysts
  - Compare Big Data On-Premises vs on the Cloud
  - Learn from Real-World Use Cases of Companies Transformed through Analytics on the Cloud
  - Navigate Google Cloud Platform Project Basics
- Analyzing Large Datasets with BigQuery
  - Walkthrough Data Analyst Tasks, Challenges, and Introduce Google Cloud Platform Data Tools
  - Demo: Analyze 10 Billion Records with Google BigQuery

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- Explore 9 Fundamental Google BigQuery Features
- Compare GCP Tools for Analysts, Data Scientists, and Data Engineers
- Lab: BigQuery Basics

- Exploring your Public Dataset with SQL
  - Compare Common Data Exploration Techniques
  - Learn How to Code High Quality Standard SQL
  - Explore Google BigQuery Public Datasets
  - Visualization Preview: Google Data Studio
  - Lab: Explore your Ecommerce Dataset with SQL in Google BigQuery
- Cleaning and Transforming your Data with Cloud Dataprep
  - Examine the 5 Principles of Dataset Integrity
  - Characterize Dataset Shape and Skew
  - Clean and Transform Data using SQL
  - Clean and Transform Data using a new UI: Introducing Cloud Dataprep
  - Lab: Creating a Data Transformation Pipeline with Cloud Dataprep
- Visualizing Insights and Creating Scheduled Queries
  - Overview of Data Visualization Principles
  - Exploratory vs Explanatory Analysis Approaches
  - Demo: Google Data Studio UI
  - Connect Google Data Studio to Google BigQuery
  - Lab: How to Build a BI Dashboard Using Google Data Studio and BigQuery
- Storing and Ingesting new Datasets
  - Compare Permanent vs Temporary Tables
  - Save and Export Query Results
  - Performance Preview: Query Cache
  - Lab: Ingesting New Datasets into BigQuery
- Enriching your Data Warehouse with JOINs
  - Merge Historical Data Tables with UNION
  - Introduce Table Wildcards for Easy Merges
  - Review Data Schemas: Linking Data Across Multiple Tables
  - Walkthrough JOIN Examples and Pitfalls
  - Lab: Troubleshooting and Solving Data Join Pitfalls
- Partitioning your Queries and Tables for Advanced Insights
  - Review SQL Case Statements
  - Introduce Analytical Window Functions
  - Safeguard Data with One-Way Field Encryption

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- Discuss Effective Sub-query and CTE design
- Compare SQL and Javascript UDFs
- Lab: Creating Date-Partitioned Tables in BigQuery

- Designing Schemas that Scale: Arrays and Structs in BigQuery
  - Compare Google BigQuery vs Traditional RDBMS Data Architecture
  - Normalization vs Denormalization: Performance Tradeoffs
  - Schema Review: The Good, The Bad, and The Ugly
  - Arrays and Nested Data in Google BigQuery
  - Lab: Querying Nested and Repeated Data
  - Lab: Schema Design for Performance: Arrays and Structs in BigQuery
- Optimizing Queries for Performance
  - Walkthrough of a BigQuery Job
  - Calculate BigQuery Pricing: Storage, Querying, and Streaming Costs
  - Optimize Queries for Cost
- Controlling Access with Data Security Best Practices
  - Data Security Best Practices
  - Controlling Access with Authorized Views
- Predicting Visitor Return Purchases with BigQuery ML
  - Intro to ML
  - Feature Selection
  - Model Types
  - Machine Learning in BigQuery
  - Lab: Predict Visitor Purchases with a Classification Model with BigQuery ML
- Deriving Insights from Unstructured Data using Machine Learning
  - Structured vs Unstructured ML
  - Prebuilt ML models
  - Lab: Extract, Analyze, and Translate Text from Images with the Cloud ML APIs
  - Lab: Training with Pre-built ML Models using Cloud Vision API and AutoML
- Completion
  - Summary and course wrap-up

Difficulty level

CERTIFICATE:

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The participants will obtain certificates signed by Google Cloud Platform.

This course along with the course Data Engineering on Google Cloud Platform additionally prepares you for **Professional Data Engineer** certification exam available at Kryterion test centers.

TRAINER:

Authorized Google Cloud Platform Trainer.

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