

From Data to Insights with Google Cloud

Varighed: 2 Days **Kursus Kode: GO6589** **Leveringsmetode: Company event (Firmakursus)**

Beskrivelse:

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 two-day instructor-led class teaches course participants how to derive insights through data analysis and visualization using the Google Cloud Platform. The course features interactive scenarios and hands-on labs where participants explore, mine, load, visualize, and extract insights from diverse Google BigQuery datasets. The course covers data loading, querying, schema modeling, optimizing performance, query pricing, and data visualization.

Firmakursus

Med et firmakursus bliver jeres it-kompetenceudvikling målrettet jeres behov. Det betyder, at vi hjælper med at finde og sammensætte det helt rigtige kursusindhold og den helt rigtige form. Kurset kan afvikles hos os eller kunden, standard eller virtuelt.

Målgruppe:

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

Agenda:

- This course teaches participants the following skills:
 - Derive insights from data using the analysis and visualization tools on Google Cloud Platform
 - Interactively query datasets using Google BigQuery
 - Load, clean, and transform data at scale
 - Visualize data using Google Data Studio and other third-party platforms
 - Distinguish between exploratory and explanatory analytics and when to use each approach
 - Explore new datasets and uncover hidden insights quickly and effectively
 - Optimizing data models and queries for price and performance
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Forudsætninger:

To get the most out of this course, participants should have:

- Basic proficiency with ANSI SQL
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Yderligere Kurser:

Gain a wider view of Google Cloud Platform using Big Data and ML Fundamentals (GO8325)

Indhold:

Module 1: Introduction to Data on the Google Cloud Platform

Before and Now: Scalable Data Analysis in the Cloud

Topics Covered

- Highlight Analytics Challenges Faced by Data Analysts
- Compare Big Data On-Premise vs on the Cloud
- Learn from Real-World Use Cases of Companies Transformed through Analytics on the Cloud
- Navigate Google Cloud Platform Project Basics
- Lab: Getting started with Google Cloud Platform
- Walkthrough Data Analyst Tasks, Challenges, and Introduce Google Cloud Platform Data Tools
- Demo: Analyze 10 Billion Records with Google BigQuery
- Explore 9 Fundamental Google BigQuery Features
- Compare GCP Tools for Analysts, Data Scientists, and Data Engineers
- Lab: Exploring Datasets with Google BigQuery
- Compare Common Data Exploration Techniques
- Learn How to Code High Quality Standard SQL
- Explore Google BigQuery Public Datasets
- Visualization Preview: Google Data Studio
- Lab: Troubleshoot Common SQL Errors
- Walkthrough of a BigQuery Job
- Calculate BigQuery Pricing: Storage, Querying, and Streaming Costs
- Optimize Queries for Cost
- Lab: Calculate Google BigQuery Pricing
- 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: Explore and Shape Data with Cloud Dataprep
- Compare Permanent vs Temporary Tables
- Save and Export Query Results
- Performance Preview: Query Cache
- Lab: Creating new Permanent Tables
- Query from External Data Sources
- Avoid Data Ingesting Pitfalls
- Ingest New Data into Permanent Tables
- Discuss Streaming Inserts
- Lab: Ingesting and Querying New Datasets
- Overview of Data Visualization Principles
- Exploratory vs Explanatory Analysis Approaches

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- Connect Google Data Studio to Google BigQuery

Module 12: Advanced Visualization with Google Data Studio

Create Pixel-Perfect Dashboards

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- Lab: Optimizing and Troubleshooting Query Performance
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- Brainstorm Data-Driven Hypotheses
- Think like a Data Scientist
- Introducing Cloud Datalab
- Lab: Reading a Google Cloud Datalab notebook
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Module 2: Big Data Tools Overview

Sharpen the Tools in your Data Analyst toolkit

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Bring your Data into the Cloud

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Module 13: Advanced Functions and Clauses

Dive Deeper into Advanced Query Writing with Google BigQuery

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Module 3: Exploring your Data with SQL

Get Familiar with Google BigQuery and Learn SQL Best Practices

Topics Covered

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Approaches

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Module 14: Optimizing for Performance

Cloud

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- Examine Logical Views, Date-Partitioned

Account Administration, and Service Accounts

Module 8: Data Visualization

- Effectively Explore and Explain your Data through Visualization

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Troubleshoot and Solve Query Performance Problems

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Module 4: Google BigQuery Pricing

- Calculate Google BigQuery Storage and Query Costs

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- Arrays and Nested Data in Google BigQuery
- Lab: Querying Nested and Repeated Data
- Create Case Statements and Calculated Fields
- Avoid Performance Pitfalls with Cache considerations
- Share Dashboards and Discuss Data Access considerations
- Lab: Visualizing Insights with Google Data Studio
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- Introduce Analytical Window Functions
- Safeguard Data with One-Way Field Encryption
- Discuss Effective Sub-query and CTE design
- Compare SQL and Javascript UDFs
- Lab: Deriving Insights with Advanced SQL Functions
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- Lab: Optimizing and Troubleshooting Query Performance
- Distill Complex Queries
- Brainstorm Data-Driven Hypotheses
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- Lab: Reading a Google Cloud Datalab notebook
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- Module 15: Advanced Insights
- Think, Analyze, and Share Insights like a Data Scientist

- Challenges, and Introduce Googl Cloud Platform Data Tools
- Demo: Analyze 10 Billion Records with Google BigQuery
- Explore 9 Fundamental Google BigQuery Features
- Compare GCP Tools for Analysts, Data Scientists, and Data Engineers
- Lab: Exploring Datasets with Google BigQuery
- Compare Common Data Exploration Techniques
- Learn How to Code High Quality Standard SQL
- Explore Google BigQuery Public Datasets
- Visualization Preview: Google Data Studio
- Lab: Troubleshoot Common SQL Errors
- Walkthrough of a BigQuery Job
- Calculate BigQuery Pricing: Storage, Querying, and Streaming Costs
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- Lab: Explore and Shape Data with Cloud Dataprep
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- Avoid Access Pitfalls
 - Review Members, Roles, Organizations, Account Administration, and Service Accounts
- Module 9: Joining and Merging Datasets
- Combine and Enrich your Datasets with more Data
- Topics Covered
- Highlight Analytics Challenges Faced by Data Analysts
 - Compare Big Data On-Premise vs on the Cloud
 - Learn from Real-World Use Cases of Companies Transformed through Analytics on the Cloud
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Module 5: Cleaning and Transforming your Data

Wrangle your Raw Data into a Cleaner and Richer Dataset

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- Lab: Reading a Google Cloud Datalab notebook
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- Avoid Access Pitfalls
- Review Members, Roles, Organizations, Account Administration, and Service Accounts

Module 16: Data Access

- Keep Data Security top-of-mind in the Cloud

Topics Covered

- Highlight Analytics Challenges Faced by

- Compare GCP Tools for Analysts, Data Scientists, and Data Engineers
- Lab: Exploring Datasets with Google BigQuery
- Compare Common Data Exploration Techniques
- Learn How to Code High Quality Standard SQL
- Explore Google BigQuery Public Datasets
- Visualization Preview: Google Data Studio
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Module 10: Google BigQuery Table Deep Dive

What sets Cloud Architecture apart?

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Module 6: Storing and Exporting Data

- Create new Tables and Exporting Results

- Performance Preview: Query Cache
- Lab: Creating new Permanent Tables
- Query from External Data Sources
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Module 11: Schema Design and Nested Data Structures

Model your Datasets for Scale in Google BigQuery

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Flere Informationer:

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