
Google Cloud Platform Fundamentals: Big Data and Machine Learning

Duration: 1 Day Course Code: GO8325

Overview:

This one-day instructor-led Google Cloud Platform course introduces participants to the big data capabilities of Google Cloud Platform. Through a combination of presentations, demos, and hands-on labs, you will get an overview of the Google Cloud platform and a detailed view of the data processing and machine learning capabilities. This course showcases the ease, flexibility, and power of big data solutions on Google Cloud Platform.

Target Audience:

Data analysts getting started with Google Cloud Platform
Data scientists getting started with Google Cloud Platform
Business analysts getting started with Google Cloud Platform
Individuals responsible for designing pipelines and architectures for data processing, creating and maintaining machine learning and statistical models, querying datasets, visualizing query results and creating reports
Executives and IT decision makers evaluating Google Cloud Platform for use by data scientists

Objectives:

- In this course you will learn:
 - Purpose and value of the key Big Data and Machine Learning products in the Google Cloud Platform
 - Use Cloud SQL and Cloud Dataproc to migrate existing MySQL and Hadoop/Pig/Spark/Hive workloads to Google Cloud Platform
 - Employ BigQuery and Cloud Datalab to carry out interactive data analysis
 - Train and use a neural network using TensorFlow
 - Employ ML APIs
 - Choose between different data processing products on the Google Cloud Platform
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Prerequisites:

- Basic proficiency with common query language such as SQL
 - Experience with data modeling, extract, transform, load activities
 - Developing applications using a common programming language such as Python
 - Familiarity with Machine Learning and/or statistics
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Content:

1. Introducing Google Cloud Platform

- Google Platform Fundamentals Overview
- Google Cloud Platform Data Products and Technology
- Usage scenarios

2. Compute and Storage Fundamentals

- CPUs on demand (Compute Engine)
- A global filesystem (Cloud Storage)
- CloudShell

3. Data Analytics on the Cloud

- Stepping-stones to the cloud
- CloudSQL: your SQL database on the cloud
- Lab: Importing data into CloudSQL and running queries
- Spark on Dataproc

4. Scaling Data Analysis

- Fast random access
- Datalab
- BigQuery
- Machine Learning with TensorFlow
- Fully built models for common needs

5. Data Processing Architectures

- Message-oriented architectures with Pub/Sub
- Creating pipelines with Dataflow
- Reference architecture for real-time and batch data processing

6. Summary

- Why GCP?
- Where to go from here
- Additional Resources

Classroom Live Labs

Lab 1: Sign up for Google Cloud Platform

Lab 2: Set up a Ingest-Transform-Publish data processing pipeline

Lab 3: Machine Learning Recommendations with SparkML

Lab 4: Build machine learning dataset

Lab 5: Train and use neural network

Lab 6: Employ ML APIs

Further Information:

For More information, or to book your course, please call us on 0800/84.009

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