Data Engineering

Advanced 6 Steps 7 hours 42 Credits

This advanced-level quest is unique amongst the other Qwiklabs offerings. The labs have been curated to give IT professionals hands-on practice with topics and services that appear in the [Google Cloud Certified Professional Data Engineer Certification](#). From Big Query, to Dataprep, to Cloud Composer & Tensorflow, this quest is composed of specific labs that will put your Google Cloud data engineering knowledge to the test. Be aware that while practice with these labs will increase your skills and abilities, you will need other preparation, too. The exam is quite challenging and external studying, experience, and/or background in cloud data engineering is recommended. Looking for a hands on challenge lab to demonstrate your skills and validate your knowledge? On completing this quest, enroll in and finish the additional challenge lab at the end of the [Engineer Data in the Google Cloud](#) to receive an exclusive Google Cloud digital badge.

Data Machine Learning Business Transformation

Prerequisites:

This Quest requires proficiency with Google Cloud Services, particularly those relating to working with large datasets. It is recommended that the student have at least earned a Badge by completing the hands-on labs in the [Baseline: Data, ML, and AI](#) and/or the [Google Cloud Essentials](#) Quests before beginning. Additional lab experience with the [Scientific Data Processing](#) and the [Machine Learning APIs](#) Quests will be useful.

Quest Outline

[Creating a Data Transformation Pipeline with Cloud Dataprep](#)

Cloud Dataprep by Trifacta is an intelligent data service for visually exploring, cleaning, and preparing structured and unstructured data for analysis. In this lab you will explore the Cloud Dataprep UI to build a data transformation pipeline.

1 hour	Advanced	7 Credits

[Building an IoT Analytics Pipeline on Google Cloud](#)

This lab shows you how to connect and manage devices using Cloud IoT Core; ingest the stream of information using Cloud Pub/Sub; process the IoT data using Cloud Dataflow; use BigQuery to analyze the IoT data. Watch this short video, [Easily Build an IoT Analytics Pipeline](#).

50 minutes	Advanced	7 Credits

[ETL Processing on Google Cloud Using Dataflow and BigQuery](#)

In this lab you will build several Data Pipelines that will ingest data from a publicly available dataset into BigQuery.

1 hour	Advanced	7 Credits

[Predict Visitor Purchases with a Classification Model in BQML](#)

In this lab you will use a newly available ecommerce dataset to run some typical queries that businesses would want to know about their customers' purchasing habits.

1 hour	Advanced	7 Credits

Predict Housing Prices with Tensorflow and AI Platform

In this lab you will build an end to end machine learning solution using Tensorflow + AI Platform and leverage the cloud for distributed training and online prediction.

1 hour 30 minutes   Advanced   7 Credits

Cloud Composer: Copying BigQuery Tables Across Different Locations

In this advanced lab you will create and run an Apache Airflow workflow in Cloud Composer that exports tables from a BigQuery dataset located in Cloud Storage bucktes in the US to buckets in Europe, then import th0se tables to a BigQuery dataset in Europe.

1 hour   Advanced   7 Credits

Quest Complete!

Congrats! You completed this quest and earned a badge. Become a cloud expert and start another.