Google Cloud Learning Resources

1. Google Cloud Tutorials on YouTube (Ryan and Poushkine)
2. New tools on Vertex AI (38 min, 4 months ago), AI Data Agent (11 min, month ago); Conversational GenAI (18 min, year ago); Vertex AI Search & Conversation (7 min, year ago); Q&A w/Vertex AI (14 min, year ago); ML on GCP (12 min, 1 year ago); AI Adventures series – 1 video, find others (4 years ago); Intro to ML at GCP (40 min, Google I/O '18); ML Zero to Hero (35 min, Google I/O'19); Train Custom ML Models with No Data Science Expertise (Google I/O'19); DL for Challenging Problems (Google I/O'19); Gemini Chatbot (4 months ago – SHORT SUMMARY); Gemini RAG (11 min, 4 months ago) – part of a larger 3rd party series – SHORT SUMMARY); Google Coral: Building On-Device AI (45 min, I/O '19 – SHORT SUMMARY); Federated learning (45 min, I/O '19 – SHORT SUMMARY).
3. 7-minute GCP video; GCP Essentials (Google I/O'19) (by Poushkine too); Fundamental of GCP @GDD Europe '17 (35 min) - great; GCP Fundamentals Smplilearn (35 min) (super great for zones and virtualization!);
4. **GOOGLE CLOUD DOCS** (free and comprehensive!) + tutorials + codelabs + code samples + architectures + training + support
5. Develop, Deploy, Debug (Cloud Source, Cloud Build, CI/CD, etc. @ Cloud Next '19); Getting Started with Containers and Google Kubernetes Engine (50 min, Cloud Next '18);
6. GCP 101 – 45 min (Cloud Next '19) – good for screenshots, but demo w/errors; GCP 101 (39 min, Google I/O '18, similar to GCP 101 from 2019); GCP on a shoestring budget (36 min, Google I/O '18);
7. **GCP in 4 words or less: a) GitHub with a short definition of each GCP tool + link to docs + link to this tool in GCP, b) interactive cheatsheet.**
8. More GCP resources: GCP YouTube channel + internal blogs + external blogs + GCP podcast + Kubernetes podcast + developer community resources + ICONS and diagrams
9. Google Cloud Specialization on Coursera (second choice after this)
10. Good AWS fundamental cloud infrastructure course

Google Cloud Skills Boost Website

(linked from GCP Training)

1. **Landing page - Grow Skills with Google Cloud Training**
2. **See Choose You Path to select a specific GCP Specialization (see GenAI, Cloud Eng, ML Eng, etc.). Individual courses are in the Course Catalog (less helpful as you often don't see a connection between them).**
3. **My Public Learning Profile**

NOTE: I discovered the below courses before realizing there are above learning paths. Following a learning path seems a much more straightforward way to learn. Keeping for history (plus many of these courses aren't free)

Introductory courses

Digital Transformation with Google Cloud (2hr)

Introduction to Generative AI (45 min)
Introduction to Large Language Models (30 min)
Introduction to Responsible AI (30 min)
Responsible AI: Applying AI Principles with Google Cloud (1 hr 30 min)

Generative AI: ML Engineer Revision (30 min)
Introduction to Function Calling with Gemini (1 hr)
Deploy a Streamlit App Integrated with Gemini Pro on Cloud Run (1 hr)

Use Machine Learning APIs on Google Cloud (6hr)
Language, Speech, Text, & Translation with Google Cloud APIs (5 hr)
Translate Text with the Cloud Translation API (30 min)
Speech to Text Transcription with the Cloud Speech API (30 min)
Model dimensions and measures using LookML (1hr 30 min, lab)
Using Specialized Processors with Document AI (Python) (45 min, lab)
And many more – a total of ~1000 courses in the course catalog.

Vertex AI: Qwik Start
BigQuery Soccer Data Analysis (45 min, lab)
BigQuery Basics for Data Analysts (4 hr)
BigLake: Qwik Start (45 min, text)
Pub/Sub: Qwik Start - Python (30 min)

Learning Path:
1. Google Cloud Computing Foundations: Cloud Computing Fundamentals (8hr)

2. Google Cloud Computing Foundations: Infrastructure in Google Cloud (8 hr)
3. Google Cloud Computing Foundations: Networking and Security in Google Cloud
4. Google Cloud Computing Foundations: Data, ML, and AI in Google Cloud

Google Developer Essentials (2 hr) – is this only 5 labs?
Cloud Engineering course (5 hr w/labs) for Google Cloud Certified Associate Cloud Engineer – is it only 5 labs?
Getting Started with Google Kubernetes Engine
Introduction to Data Analytics on Google Cloud (8 hr, standalone course for data analysis)

Data Analytics Certificate (for data analysis)
Course 1. Introduction to Data Analytics in Google Cloud (18 hr)
Course 3. Data Transformation in the Cloud (18 hr)

Intermediate courses

Google Cloud AI and ML Solutions for the Public Sector
Perform Predictive Data Analysis in BigQuery (5 hr) – for large datasets
Classify Images with TensorFlow on Google Cloud (7hr)

Advanced courses

Google Cloud Solutions I: Scaling Your Infrastructure (hands-on labs, load balancing, autoscaling, continuous delivery pipelines, etc.)
Google Cloud Solutions II: Data and Machine Learning (4 hr – just labs?)

Google Cloud Platform

Contents

(by GPT-4, Llama 3, Claude 3 – the three models)

Big Data and Machine Learning

- Google BigQuery
- Google Cloud Dataflow
- Serverless Data Warehousing
- Google Cloud Dataproc
- Managed Hadoop and Spark
- Batch and Stream Data Processing

AI and Machine Learning

- Google Cloud AI Platform, Notebooks, Pipelines, Training and Predictions
- Google Cloud Vision API
- Google Cloud Natural Language API

Networking

- Virtual Private Cloud (VPC)
- Cloud Load Balancing (HTTP(S), TCP/SSL, Network LB)
- Cloud CDN

Identity & Security

- Cloud Identity & Access Management (IAM)
- Key Management Service (KMS)

DevOps and Deployment

- Cloud Source Repositories
- Google Cloud Build (CI/CD)
- Cloud Developer Tools
- Building and Deploying Containers
- Google Cloud Deployment Manager
- Infrastructure as Code (IaC)
- Deployment Templates and Configurations

Monitoring, Logging, and Management

- Google Cloud Operations (Monitoring, Alerting, Incident Management)
- Google Cloud Logging (Log Ingestion and Viewing, Log-based Metrics, Log Sinks and Exports)
- Google Cloud Billing and Cost Management

Developer Tools

- Cloud SDK
- Container Registry
- Cloud Build

Prompt to merge responses from the three models:

1. Below are responses from three different LLMs - merge them together.
2. Do not summarize and do not allow any loss of information.
3. If some information is redundant, say it just once.
4. Provide structure in the merged text in the form of sections

Response 1

Response 2

Response 3