

# Google Skills Summary

## Paths:

### 1. ( 6h30m) Intelligent Search: Configuring and Improving Search Results

- ( 1h00m) Vertex AI Search and Gemini Enterprise UI Configurations
- ( 0h30m) Vertex AI Search and Gemini Enterprise Analytics
- ( 3h30m) Improve Vertex AI Search and Gemini Enterprise Search Results
- ( 1h30m) Configure AI Applications to optimize search results

### 2. ( 8h30m) Evaluating Model and Agent Performance

- ( 1h30m) Model evaluation on Vertex AI
- ( 2h30m) Machine Learning Operations with Vertex AI: Model Evaluation
- ( 2h00m) Evaluate ADK Agents with Vertex AI Gen AI Evaluation Service
- ( 2h00m) Evaluate Gen AI model and agent performance

### 3. ( 2h00m) Inference on TPUs

- ( 1h00m) Architecting an AI Inference Stack
- ( 1h00m) How to Use TPUs for Inference

### 4. ( 64h30m) DevSecOps

- ( 5h45m) Getting Started with Google Kubernetes Engine
- ( 6h30m) Architecting with Google Kubernetes Engine: Workloads
- ( 6h30m) Architecting with Google Kubernetes Engine: Production
- ( 8h30m) Managing Security in Google Cloud
- (11h15m) Security Best Practices in Google Cloud
- ( 5h00m) Mitigating Security Vulnerabilities on Google Cloud
- ( 6h30m) Getting Started with Terraform for Google Cloud
- ( 8h30m) Security & Identity Fundamentals
- ( 0h30m) Implement CI/CD Pipelines on Google Cloud
- ( 3h30m) DevOps Essentials
- ( 2h00m) Google Kubernetes Engine Best Practices: Security

### 5. ( 56h30m) Generative AI for Developers

- ( 1h45m) Explore Generative AI with the Gemini API in Vertex AI
- ( 4h00m) Vector Search and Embeddings
- ( 8h00m) Custom Search with Embeddings in Vertex AI
- ( 1h45m) Inspect Rich Documents with Gemini Multimodality and Multimodal RAG

- ( 3h00m) Improving developer velocity with Gemini Code Assist
- ( 5h00m) Integrate Vertex AI Search and Conversation into Voice and Chat Apps
- ( 9h00m) Orchestrating Gen AI Applications with LangChain
- ( 4h00m) Orchestrate LLM solutions with LangChain
- ( 6h00m) Deploy, Test & Evaluate Gen AI Apps
- ( 8h00m) Develop Advanced Enterprise Search and Conversation Applications
- ( 6h00m) Empower Gen AI apps with tool use

## **6. ( 38h30m) Generative AI Specialization: Certification & Skill Badge Requirements**

- ( 2h00m) Responsible AI: Applying AI Principles with Google Cloud
- ( 1h30m) Extend Gemini with controlled generation and Tool use
- ( 1h30m) Deploy and Evaluate Model Garden Models
- ( 1h30m) Edit images with Imagen
- ( 2h30m) Deploy a RAG application with vector search in Firestore
- ( 2h00m) Evaluate Gen AI model and agent performance
- ( 1h30m) Build search and recommendations applications with AI Applications
- ( 1h30m) Configure AI Applications to optimize search results
- ( 2h00m) Extend Gemini Enterprise Assistant Capabilities
- ( 1h30m) Create media search and media recommendations applications with AI Applications
- ( 5h00m) Integrate Vertex AI Search and Conversation into Voice and Chat Apps
- ( 8h00m) Text Prompt Engineering Techniques
- ( 8h00m) Develop Advanced Enterprise Search and Conversation Applications

## **7. ( 47h15m) Professional Cloud DevOps Engineer Certification**

- ( 5h00m) Google Cloud Fundamentals: Core Infrastructure
- ( 8h00m) Developing a Google SRE Culture
- (14h00m) Reliable Google Cloud Infrastructure: Design and Process
- ( 8h30m) Logging and Monitoring in Google Cloud
- ( 6h30m) Getting Started with Terraform for Google Cloud
- ( 1h15m) Set Up an App Dev Environment on Google Cloud
- ( 1h00m) Implement DevOps Workflows in Google Cloud
- ( 1h15m) Monitor and Log with Google Cloud Observability
- ( 1h45m) Build Infrastructure with Terraform on Google Cloud

## **8. (104h30m) Professional Machine Learning Engineer**

- ( 8h00m) Introduction to AI and Machine Learning on Google Cloud
- ( 1h30m) Prepare Data for ML APIs on Google Cloud
- ( 5h15m) Working with Notebooks in Vertex AI
- ( 0h30m) Create ML Models with BigQuery ML
- ( 0h30m) Engineer Data for Predictive Modeling with BigQuery ML
- (24h00m) Feature Engineering
- (15h30m) Build, Train and Deploy ML Models with Keras on Google Cloud
- (16h00m) Production Machine Learning Systems
- ( 4h30m) Machine Learning Operations (MLOps): Getting Started
- ( 8h00m) Machine Learning Operations (MLOps) with Vertex AI: Manage Features
- ( 0h45m) Introduction to Generative AI
- ( 1h00m) Introduction to Large Language Models
- ( 0h30m) Machine Learning Operations (MLOps) for Generative AI
- ( 2h30m) Machine Learning Operations (MLOps) with Vertex AI: Model Evaluation
- ( 4h00m) Create Generative AI Apps on Google Cloud
- ( 4h00m) Responsible AI for Developers: Fairness & Bias
- ( 3h00m) Responsible AI for Developers: Interpretability & Transparency
- ( 5h00m) Responsible AI for Developers: Privacy & Safety

## **9. ( 62h45m) API Developer**

- ( 5h00m) Google Cloud Fundamentals: Core Infrastructure
- ( 8h00m) API Design and Fundamentals of Google Cloud's Apigee API Platform
- (24h00m) API Security on Google Cloud's Apigee API Platform
- (24h00m) API Development on Google Cloud's Apigee API Platform
- ( 0h45m) Develop and Secure APIs with Apigee X
- ( 1h00m) Deploy and Manage Apigee X

## **10. ( 18h30m) Introduction to Generative AI**

- ( 1h45m) Generative AI for Business Leaders
- ( 0h15m) Introduction to Responsible AI
- ( 2h00m) Responsible AI: Applying AI Principles with Google Cloud
- ( 2h00m) Introduction to Vertex AI Studio
- ( 8h00m) Text Prompt Engineering Techniques
- ( 4h00m) Boost Productivity with Gemini in BigQuery
- ( 0h30m) Generative AI Fundamentals

**11. ( 19h30m) Generative AI for Machine Learning Engineers**

- ( 0h30m) Attention Mechanism
- ( 0h30m) Encoder-Decoder Architecture
- ( 0h30m) Transformer Models and BERT Model
- ( 0h30m) Introduction to Image Generation
- ( 0h30m) Create Image Captioning Models
- ( 4h00m) Vector Search and Embeddings
- ( 8h00m) Custom Search with Embeddings in Vertex AI
- ( 8h00m) Develop Advanced Enterprise Search and Conversation Applications
- ( 5h00m) Integrate Vertex AI Search and Conversation into Voice and Chat Apps