

Introduction to Agent Search for Commerce

In this course you will explore Agent Search for commerce and how it can be used to improve customer experience. You will explore the core functionalities of Agent Search for commerce with a discussion on common use cases and solutions before implementing a basic search app in Agent Search for commerce. Afterwards, you will discuss how to manage data ingestion and quality for your search app, optimize recommendations with personalization, deploy your search app, monitor and analyze search performance, and discuss advanced features and general best practices.

**DURATION**

2 days

**LEVEL**

200 - Intermediate

**FORMAT**

Instructor-led

What you'll learn

- Understand the core functionalities of Agent Search for commerce.
- Explore use cases and solutions using Agent Search for commerce
- Implement data ingestion and quality pipelines for catalog and user event data
- Personalize search results and recommendations for customers
- Monitor search performance results
- Understand advanced features and best practices for Agent Search for commerce
- Configure and distinguish between search and browse functionalities to improve catalog exploration.
- Configure serving configurations, controls, and query expansion to optimize search ranking and recall.
- Implement dynamic faceting to enable users to refine and filter search results.

Overview	7 modules · 6 labs · 6 classroom activities
Who this course is for	• Search Engineers, Data Engineers, and Data Scientists who wish to learn how to understand the core functionalities of Agent Search for commerce.
Products	• Agent Platform • Agent Search on Gemini Enterprise Agent Platform • AI Commerce Search on Gemini Enterprise for Customer Experience • Gemini Enterprise • BigQuery Studio • Retail Search • Agent Studio on Gemini Enterprise Agent Platform • Storage Insights • Dataflow Prime • Gemini • BigQuery • Cloud Storage • Dataflow
Prerequisites	• "Modernizing Retail and Ecommerce Solutions with Google Cloud" or equivalent experience with Google Cloud

Module 01

Introduction to Agent Search for Commerce

Topics	• Overview of Agent Search for commerce • Key concepts for Agent Search for commerce • Tour of Agent Search for commerce in the Cloud Console • Example use cases
Objectives	• Understand key concepts for Agent Search for commerce • Leverage Agent Search for commerce features and capabilities • Discover typical use cases for Agent Search for commerce

Module 02

Data Ingestion

Topics	• Data ingestion pipelines • Data sources (Cloud Storage, BigQuery, Merchant Center) • Data transformations and pre-processing
Objectives	• Ingest product data into Agent Search for commerce using ETL pipelines • Track user events in real time • Manage ongoing updates to keep data fresh
Activities	• Lab: Performing data transformations and validation

Module 03

Data Management

Topics	• More on data transformations and pre-processing • Working with product metadata and attributes • Data quality and consistent updates
Objectives	• Understand key product data structures for Agent Platform. • Identify essential attributes and their impact on AI performance. • Explore advanced data transformation techniques for catalogs. • Align product data with Google Cloud Retail schema for optimal results.
Activities	• Lab: Managing and updating product metadata

Module 04

Search and Browse

Topics

- Data Quality
- Search and Browse Functionality Deep Dive
- Results Personalization
- Optimization Controls

Objectives

- Distinguish search vs. browse functionalities
- Understand search and browse performance tiers
- Improve and maintain data quality
- Describe ranking, optimization, and personalization
- Identify key catalog and user event attributes

Activities

- Lab: Personalizing Search Results with Agent Search for commerce

Module 05

Recommendations

Topics

- Recommendations Overview
- Recommendation Models
- Building a Recommendation Strategy

Objectives

- Distinguish between different recommendation models
 - Correlate page types with optimization objectives
 - Build a strategy for implementing recommendations
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Module 06

Deployment, Monitoring, and Testing

Topics

- Serving Configurations and Controls
- A/B Testing and Experimentation
- Analytics
- Monitoring

Objectives

- Use serving configs and controls for model deployment
- Validate deployment with previews
- Monitor system health and metrics
- Understand iterative optimization for Agent Search for commerce

Module 07

Advanced Features

Topics

- Query Expansion
- Faceting and Filtering
- Boosting Search Results
- Agent Search for commerce Integration with other Google Cloud Services

Objectives

- Use query expansion to improve search recall
- Implement dynamic faceting to help users refine results
- Apply boost controls to influence product ranking
- Integrate Agent Search for commerce with other Google Cloud services