

Course Introduction & What We'll Cover

Lesson 0.1

What is 'Agentic Search' in This Course

Search systems that autonomously retrieve, evaluate, and synthesize information from multiple sources to generate responses

Autonomous Decision-Making

System selects sources and extracts claims without per-step human input

Claim-Level Evaluation

Assesses specific facts and statements, not entire pages

Multi-Source Synthesis

Combines information from multiple documents to create single response

Selection Before Visibility

System decides what information to use before user sees results

Examples in production

- ChatGPT web browsing and citations
- Perplexity answer generation with sources
- Google AI Overviews (formerly SGE)
- Bing Chat / Copilot responses

What Agentic Search is NOT

Traditional Search Engines

Why not agentic Return ranked list of pages; human selects and evaluates

Example Classic Google SERP with 10 blue links

Simple Chatbots

Why not agentic Follow scripted flows without autonomous information retrieval

Example Customer service bots with predefined responses

Recommendation Systems

Why not agentic Filter and rank existing items; don't synthesize new information

Example Netflix recommendations, Amazon 'You might like'

Basic Voice Assistants

Why not agentic Execute commands or lookup single facts

Example Siri setting timer, Alexa playing music

If the system just retrieves and ranks existing content for humans to evaluate, it's not agentic search in our definition

Primary Focus

LLM-Based Search

ChatGPT with web search

Perplexity

Claude with search

Gemini

Generate synthesized responses
using multiple web sources

Search Engine AI Features

Google AI Overviews

Bing Chat/Copilot

Augment traditional search with
generated answers

Enterprise AI Assistants

Microsoft Copilot 365

Notion AI

Glean

Search and synthesize across
internal knowledge bases

Secondary Focus

- Retrieval-Augmented Generation (RAG) systems in production
- AI agents with web access and tool use
- Knowledge graph-enhanced search systems

Each stage involves autonomous decisions that determine if your content gets used

Intermediaries and Decision Processes

Query Understanding

- Intent classification (informational, transactional, navigational)
- Entity recognition and disambiguation
- Query decomposition into sub-tasks

Retrieval

- Which sources to query (web, knowledge graphs, databases)
- How many candidates to retrieve
- Initial relevance filtering

Evaluation

- Source credibility assessment
- Claim verification across sources
- Confidence scoring

Synthesis

- Which claims to include
- How to combine conflicting information
- Whether to cite sources explicitly

What You Will Be Able to Do

Diagnosis

- Identify whether your content is being excluded at retrieval, evaluation, or synthesis stages
- Recognize the difference between visibility and selection
- Distinguish structural changes from superficial tool updates

Content Design

- Structure information for extraction and synthesis rather than reading
- Create atomic, verifiable claims that agents can reuse
- Implement entity markup that supports multi-hop reasoning

Measurement

- Develop test queries to assess your selection probability
- Track information reuse across different agent systems
- Measure entity recognition and relationship completeness

Strategic Decisions

- Evaluate new SEO claims against mechanism understanding
- Prioritize optimization efforts based on system architecture
- Identify durable principles vs. transient tactics

You can explain how agent systems select information

You can identify why your content is excluded

You can design content for agent consumption

You can measure performance in agent-mediated search

You can distinguish signal from noise