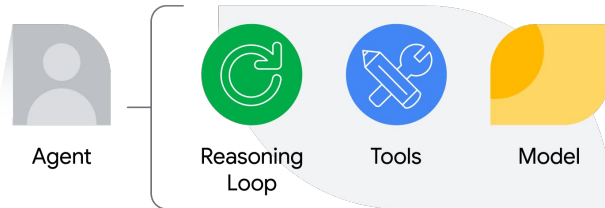# Google Cloud

Gen AI Agents: Transform Your Organization

Congratulations on completing the fifth course of the Gen AI Leader learning path. This course summary is your review guide. Print it for a handy reference as you continue your gen AI learning journey.

Agent components

Agent — Reasoning Loop — Tools — Model

Types of agents

- **Deterministic (traditional):** Agents that are built with predefined paths and actions.
- **Generative:** Agents that are defined with natural language using LLMs to give a real conversational feel to your chatbot.

Experiment with the Gemini API through **Google AI Studio** and **Vertex AI Studio.**

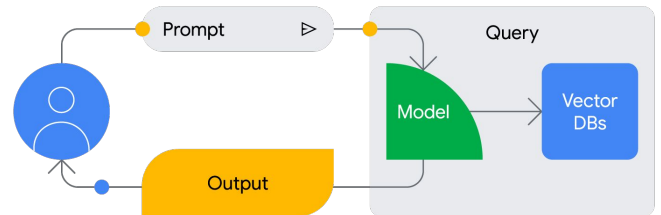## Reasoning loop: Prompt engineering techniques

- **ReAct (Reason and act):** Allow the LLM to reason and take action on a user query.
- **CoT (Chain-of-thought):** Guide an LLM through a problem-solving process by providing examples with intermediate reasoning steps.
- **Metaprompting:** Use prompting to guide the AI model to generate, modify, or interpret other prompts.

Tooling

- **Extensions:** Connect to external services (via APIs).
- **Functions:** Define specific actions or tasks.
- **Data stores:** Provide access to information.
- **Plugins:** Add new skills and integrations

RAG: Retrieval-Augmented Generation

1. **Retrieval:** The LLM retrieves relevant information from external sources using tooling.
2. **Augmentation:** The retrieved information is incorporated into the prompt to the LLM.
3. **Generation:** The LLM processes the prompt and generates a response.
4. **Iteration (optional):** The LLM can iterate on the retrieval process as necessary.

Customer Engagement Suite: Tools to support your company in engaging with customers effectively, which can be built on top of Google's Contact Center as a Service (CCaaS), an enterprise-grade contact center solution that is native to the cloud.

- Conversational Agents: act as effective chatbots to your customers.
- Agent Assist: Support your live human contact center agents.
- Conversational Insights: Gain insights into all your communications with customers.

Vertex AI Search: Search and recommendation solutions for your business.

Gemini Enterprise: Integrate customized search and conversation agents that can access and understand data from various internal sources into your organization's internal websites or dashboards.

To **plan for your gen AI strategy**, establish a clear vision, prioritize use cases, invest in capabilities, manage change, measure value, and champion responsible AI.