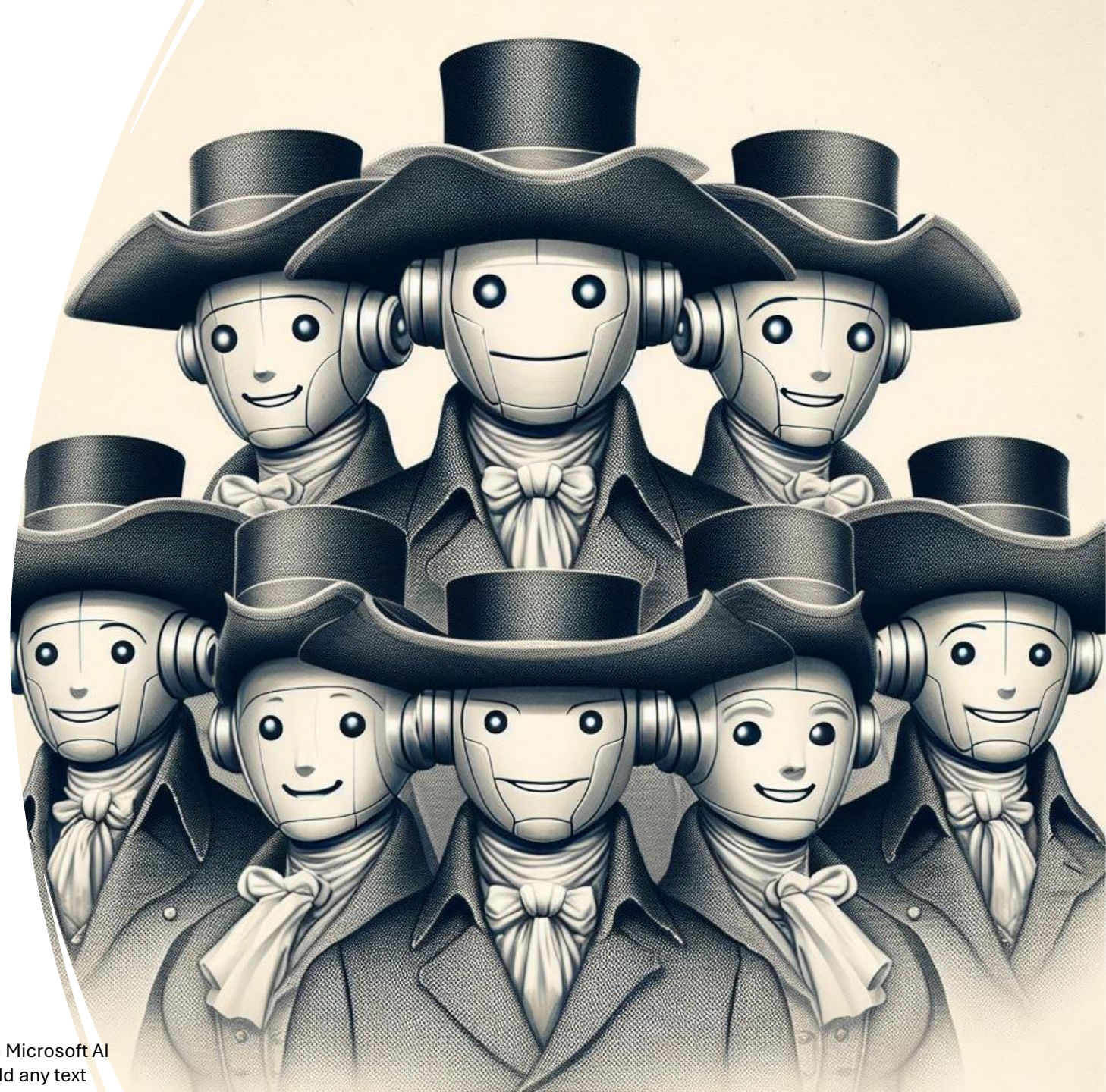
Agentic AI

Unlocking the Power of Multi-Agent Systems



Juan Pablo Garcia Gonzalez

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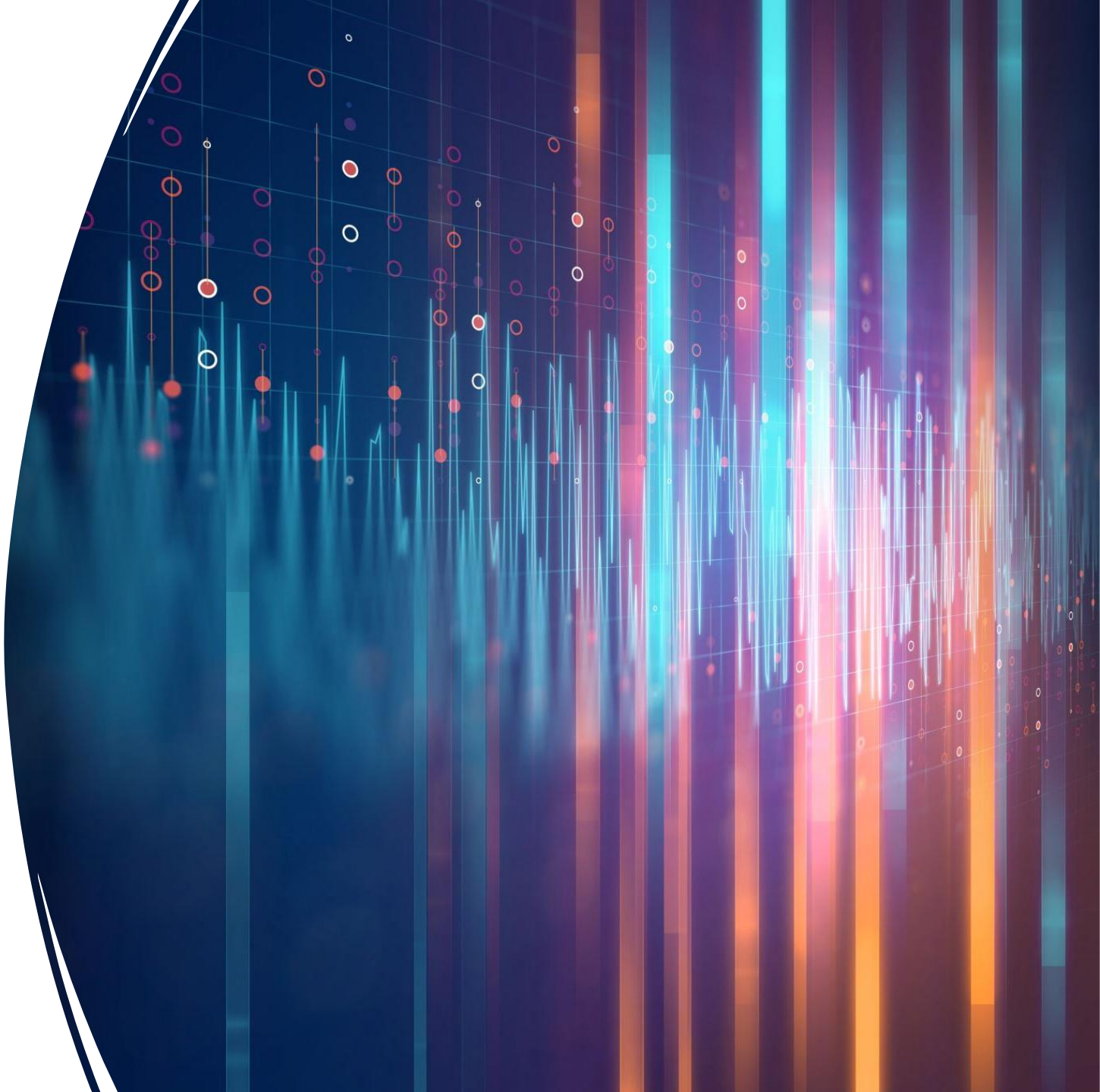
Prompt: A colonial style presentation first page full image for a technical talk about Autogen, the Microsoft AI framework. The image includes AI agents with the 3 point hats, smiling, but not people.. Don't add any text

Intro

AI solution: Increasing level of complexity



AI solution: Increasing level of complexity

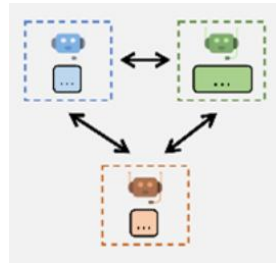
Answer General questions

Answer grounded questions

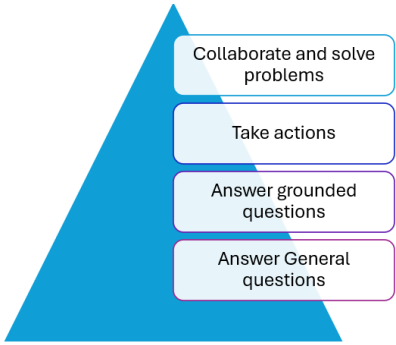
RAG

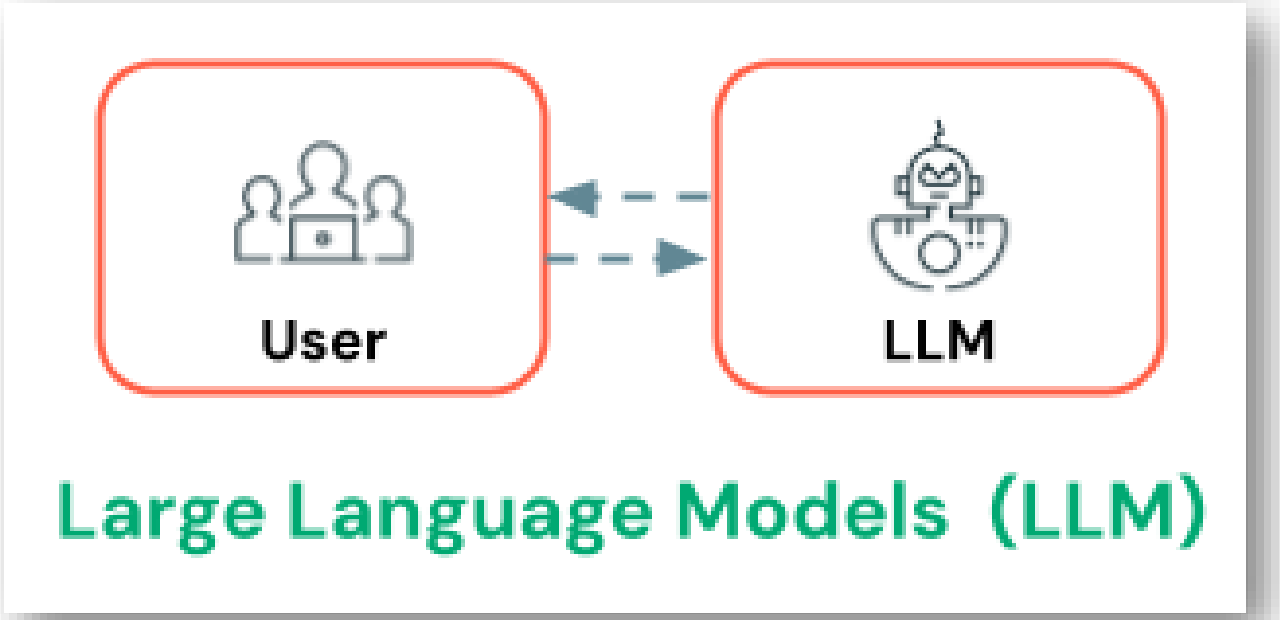
Take actions

Collaborate and solve problems

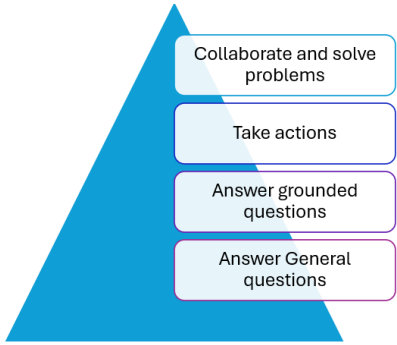


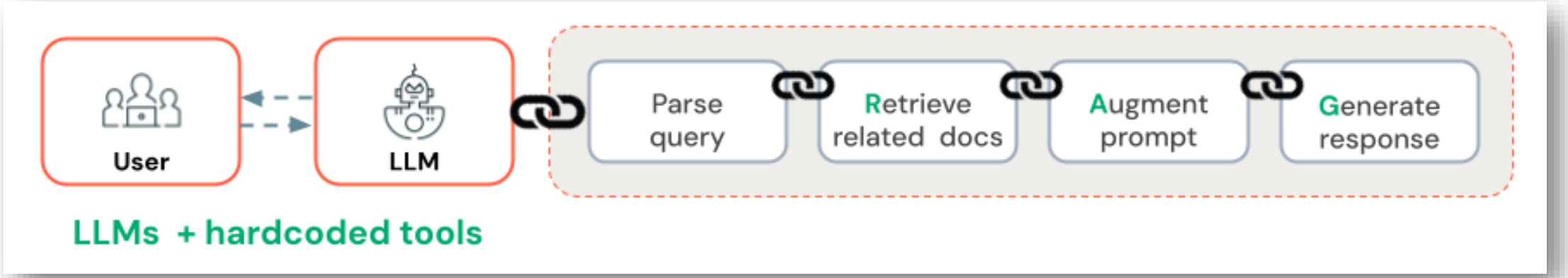
Level 1: Answer questions

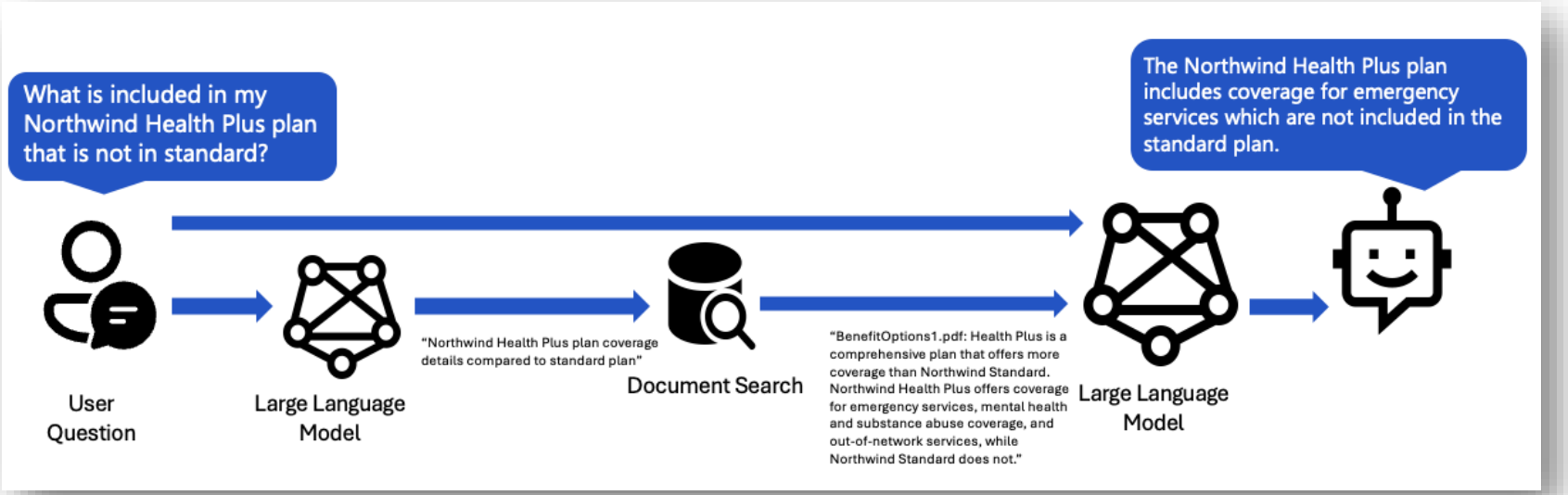


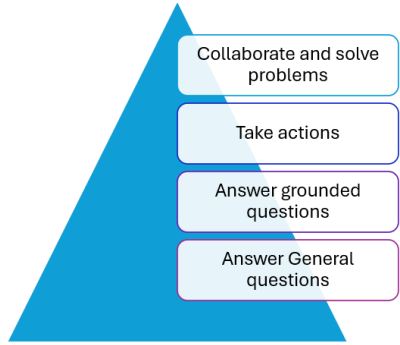


Level 2: Answer grounded questions



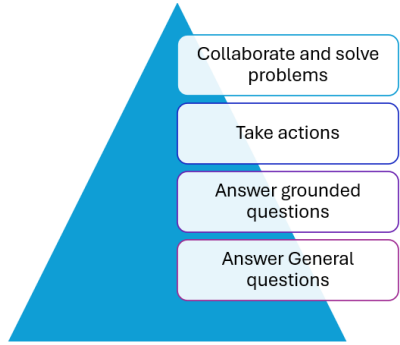






Level 3: Taking actions

semantic engine (Model) → Memory → Tools, functions to execute actions → Knowledge



Level 3: Agent taking actions

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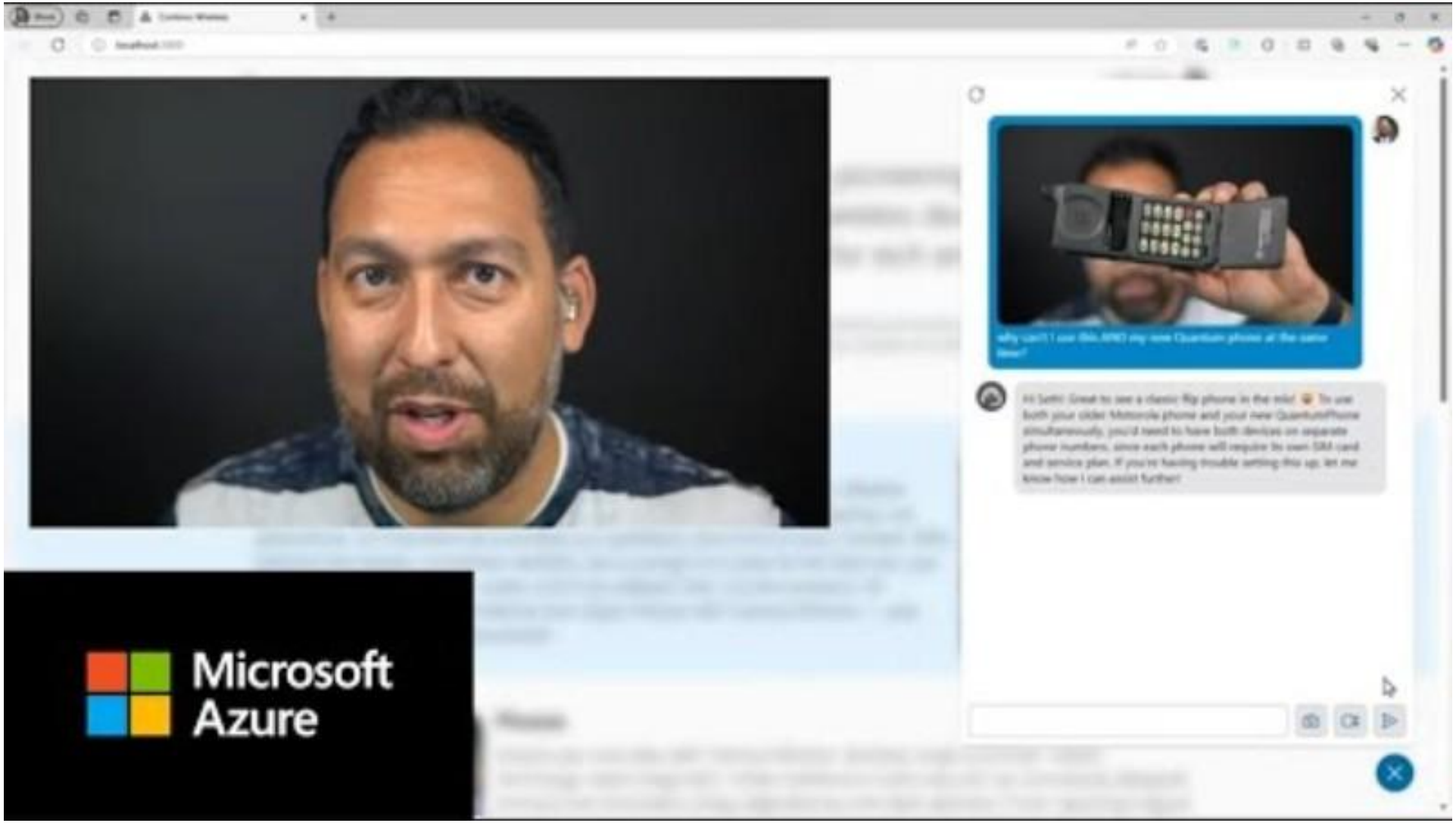
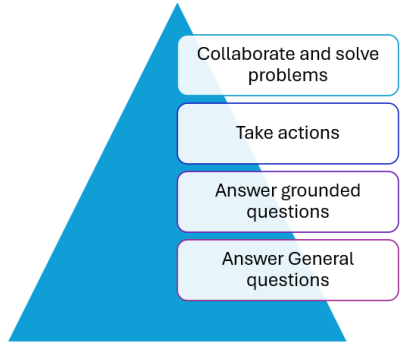
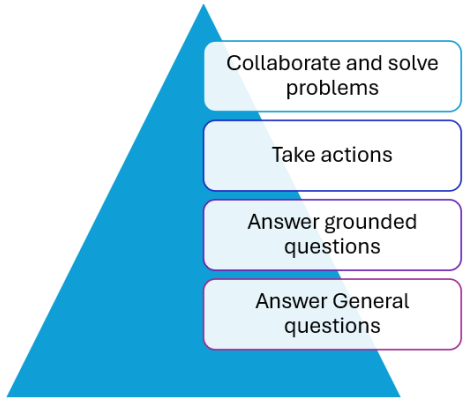
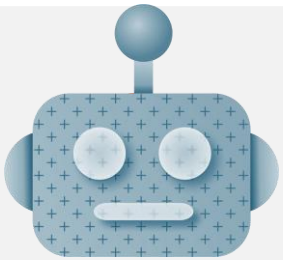




Semantic Kernel Agent Framework (Experimental)





What is an AI agent?

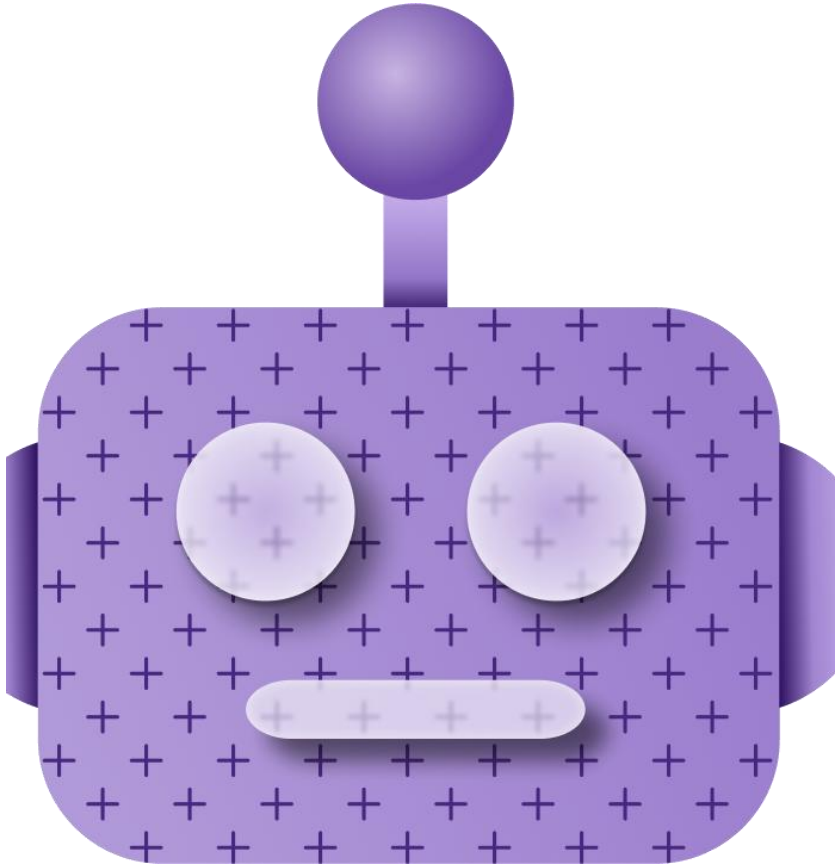
What problems do AI agents solve?

When to use an AI agent?

Overview of the Agent Architecture (Experimental)

Goals

- The *Semantic Kernel* framework serves as the **core foundation** for implementing agent functionalities.
- **Multiple agents** can **collaborate** within a single conversation, while integrating human input.
- An agent can engage in and manage **multiple concurrent** conversations simultaneously.
- **Different types** of agents can participate in the same conversation, each contributing their **unique capabilities**.



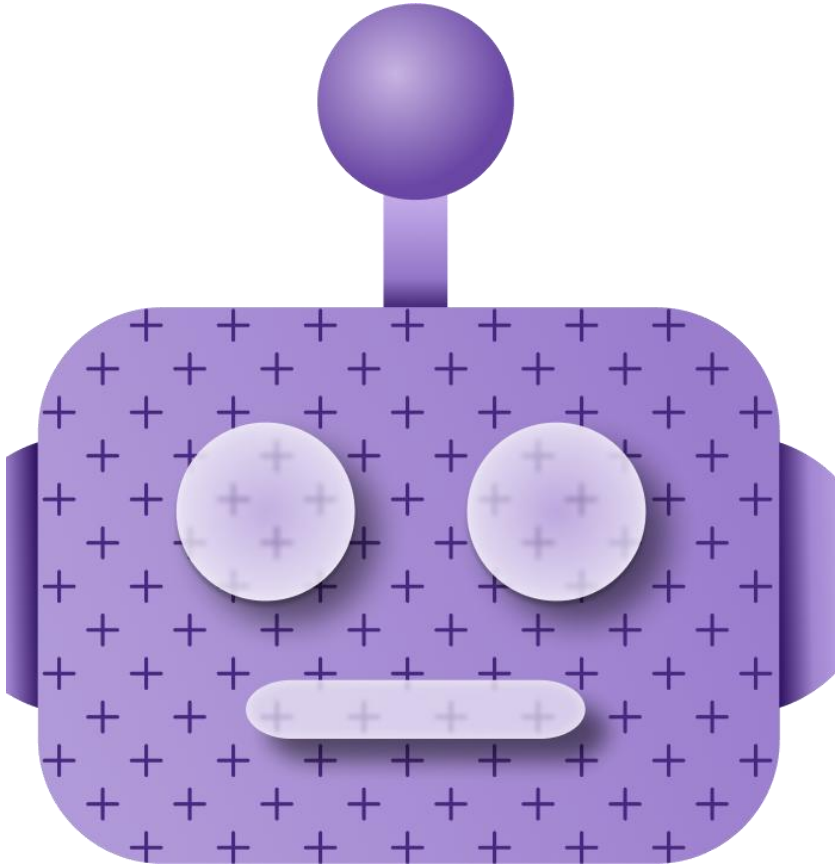
Overview of the Agent Architecture (Experimental)

Core Agent components

- Agents
  - ChatCompletionAgent
  - OpenAIAssistantAgent
- Agent Chat
  - Agent Channel

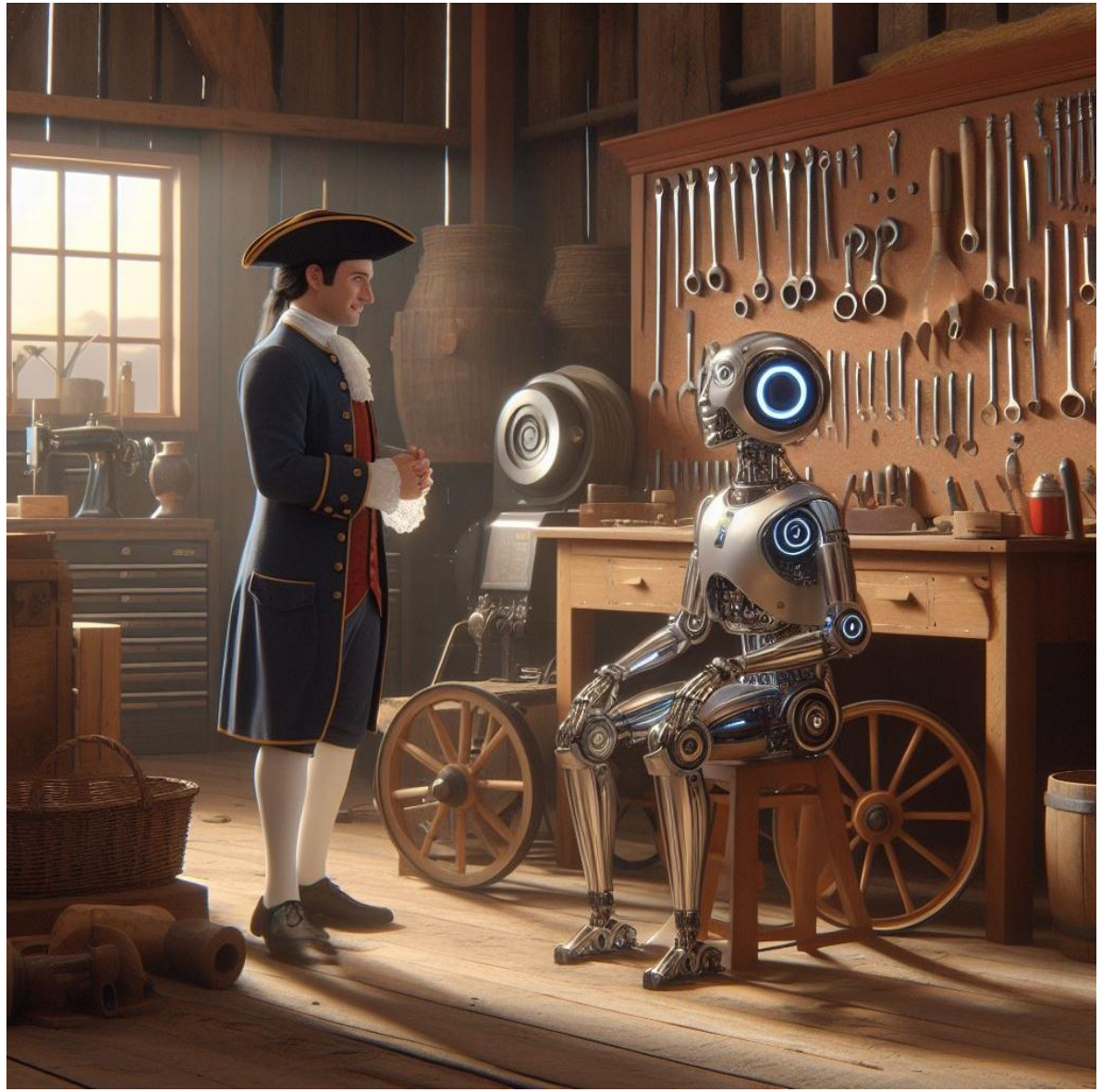
Agent Alignment with Semantic Kernel Features

- Kernel
- Plugins and Function Calling
- Agent Messages
- Templating



Demo

Semantic Kernel Agent Framework 101



Workshop LAB 6

Exercise 1: Introduction to Agent with Semantic Kernel

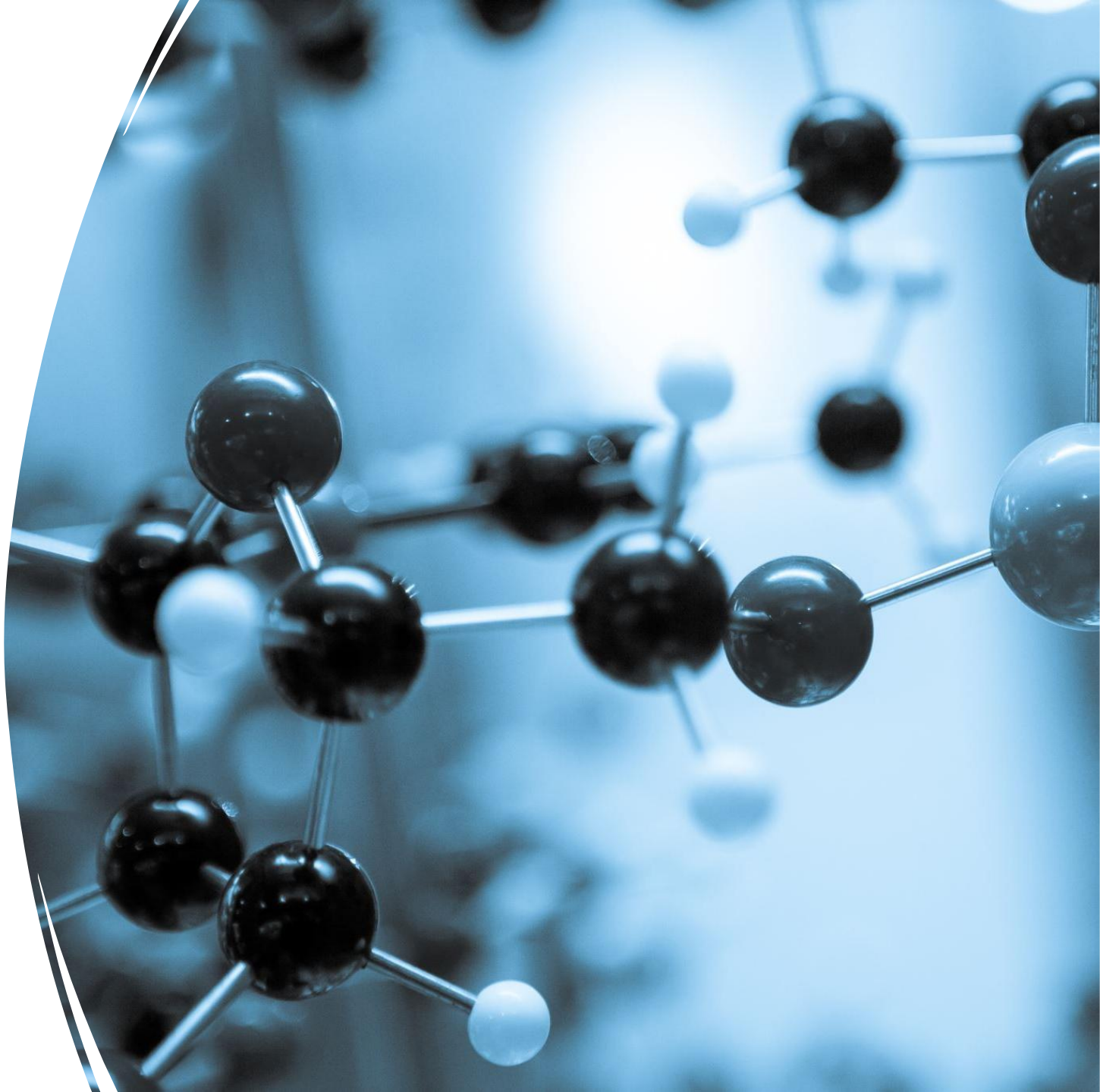
Exercise 2: Building Your First Semantic Kernel Agent with Skills

Exercise 3: Agent Group Chat

Exercise 4: Agent group chat with human inn the loop

References

- Semantic Kernel Agent Framework (Experimental) | Microsoft Learn
- Semantic Kernel Agent Architecture (Experimental) | Microsoft Learn
- Microsoft's Agentic AI Frameworks: AutoGen and Semantic Kernel | Semantic Kernel Dev Blogs
- Semantic Kernel documentation | Microsoft Learn
- Productive AI with Semantic Kernel Productive AI with Semantic Kernel



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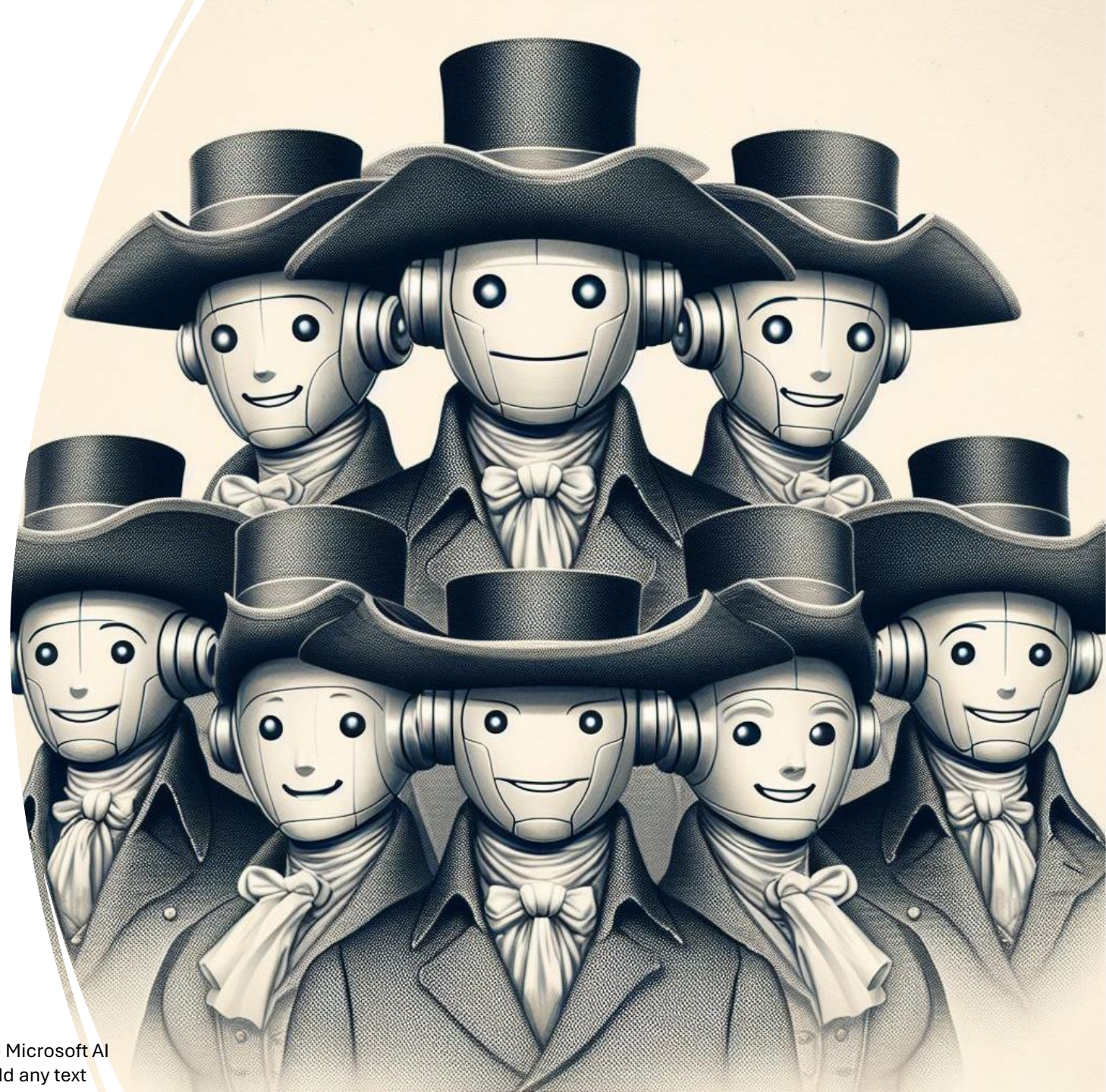

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