

Agentic AI

Unlocking the Power of
Multi-Agent Systems



Juan Pablo Garcia Gonzalez

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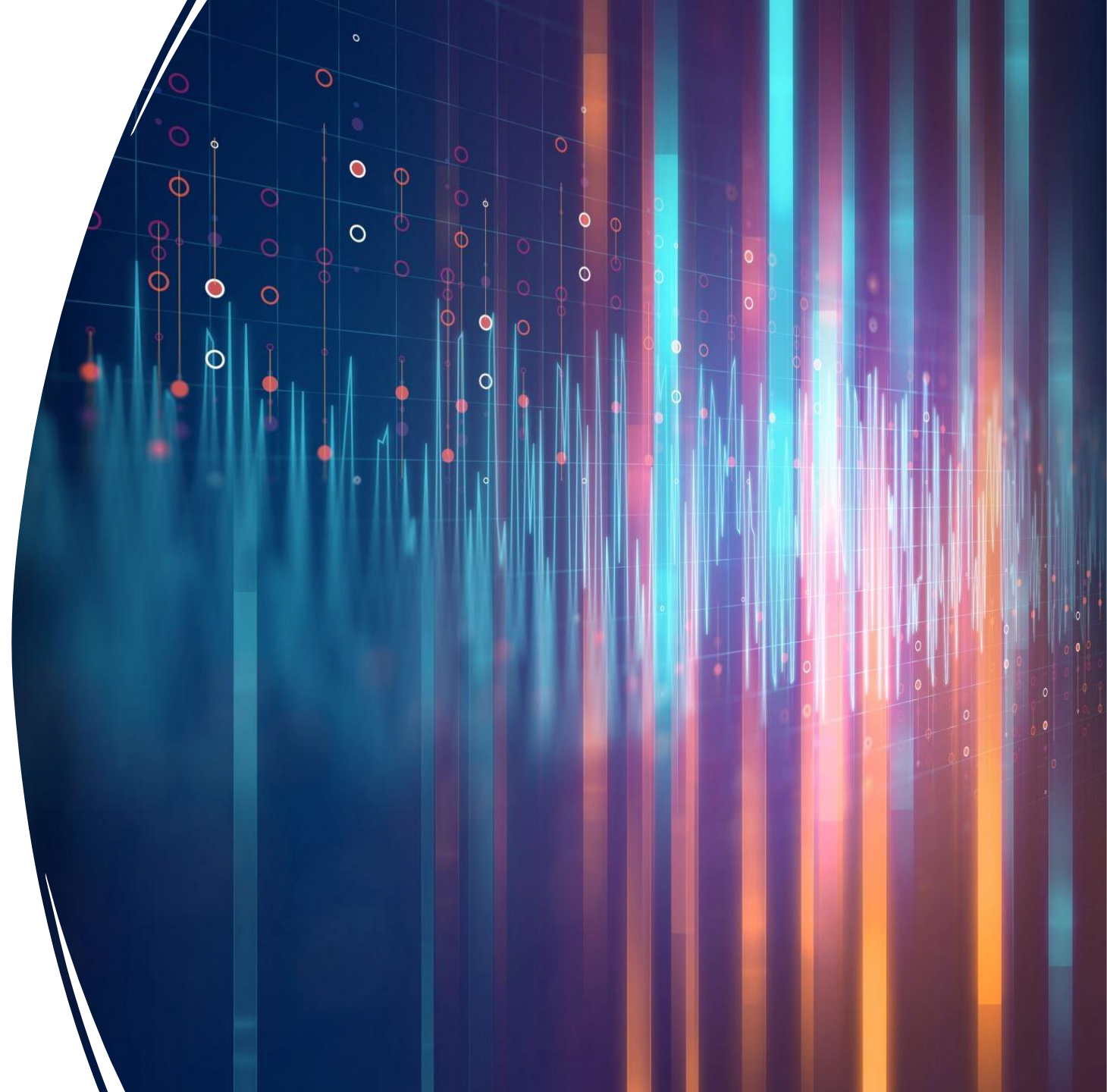
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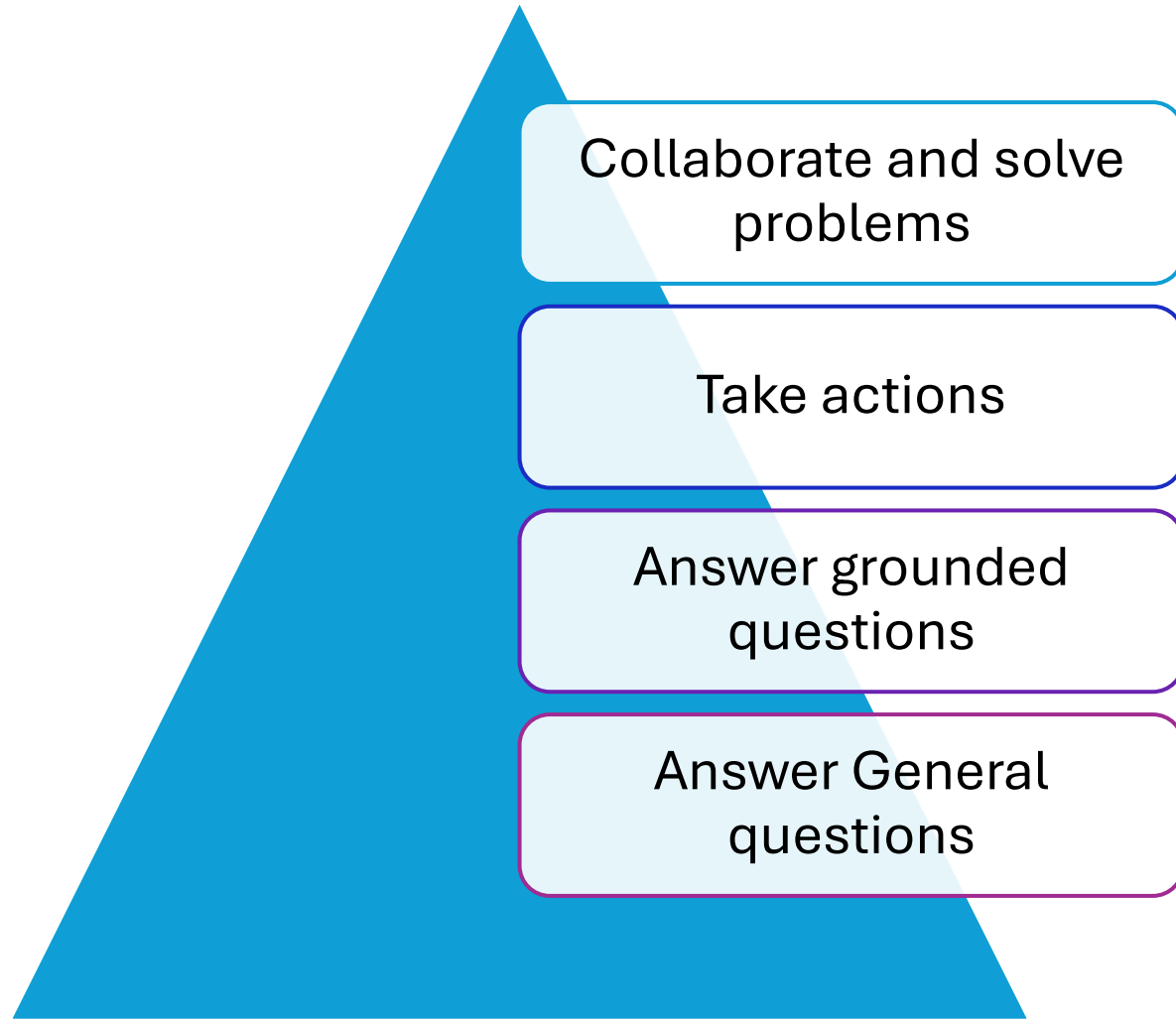
Prompt: A colonial style presentation first page full image for a technical talk about Autogen, the Microsoft AI framework. The image includes AI agents with the 3 point hats, smiling, but not people.. Don't add any text

Intro

AI solution: Increasing
level of complexity



AI solution: Increasing level of complexity



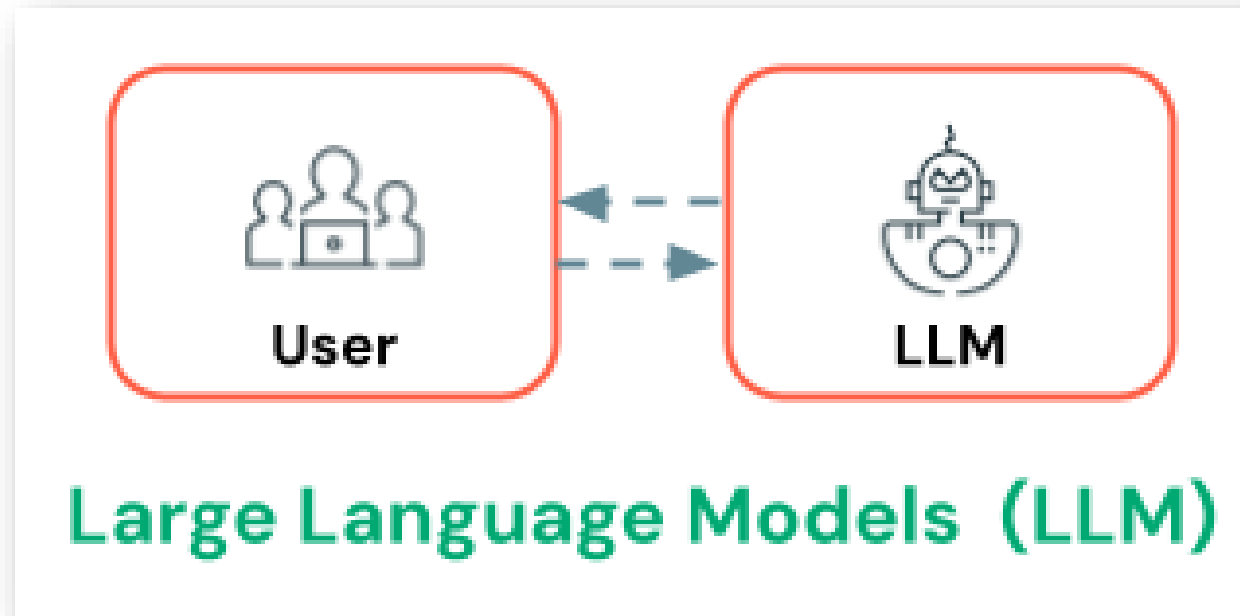
Level 1: Answer questions

Collaborate and solve problems

Take actions

Answer grounded questions

Answer General questions



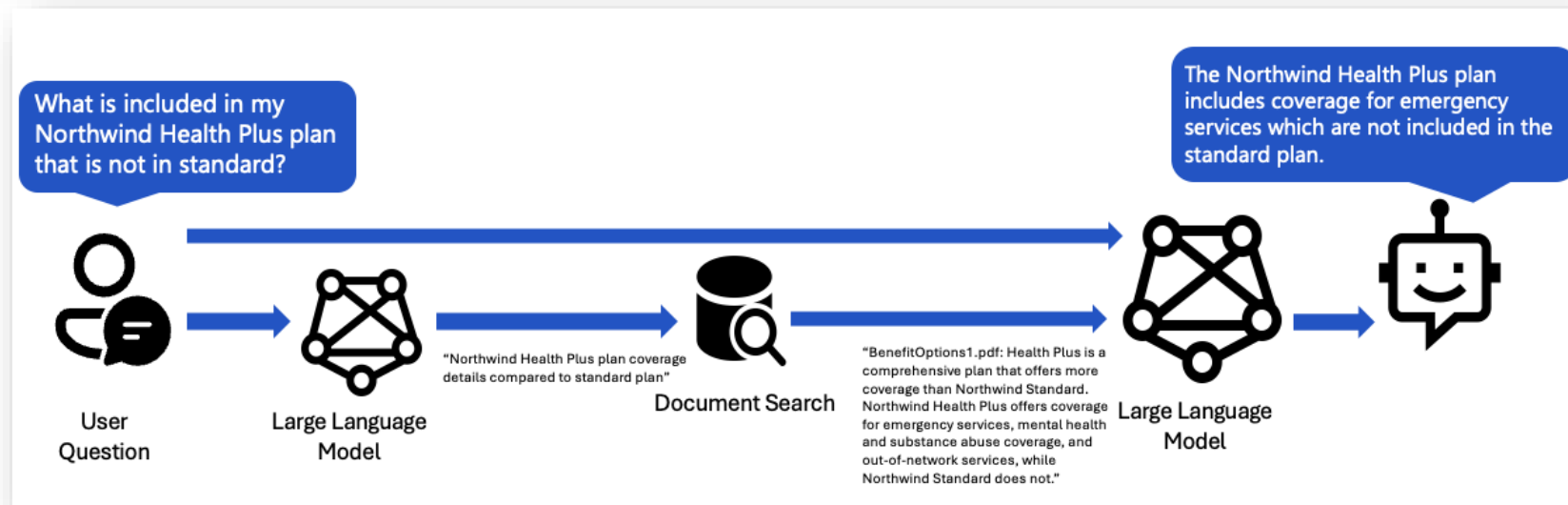
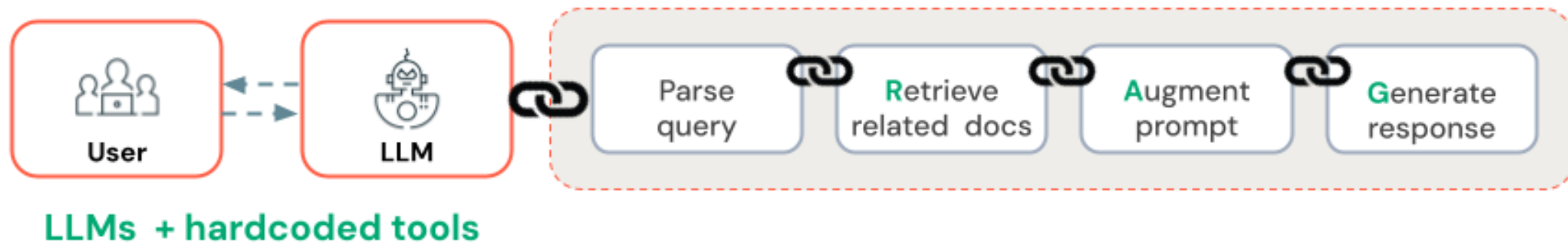
Level 2: Answer grounded questions

Collaborate and solve problems

Take actions

Answer grounded questions

Answer General questions



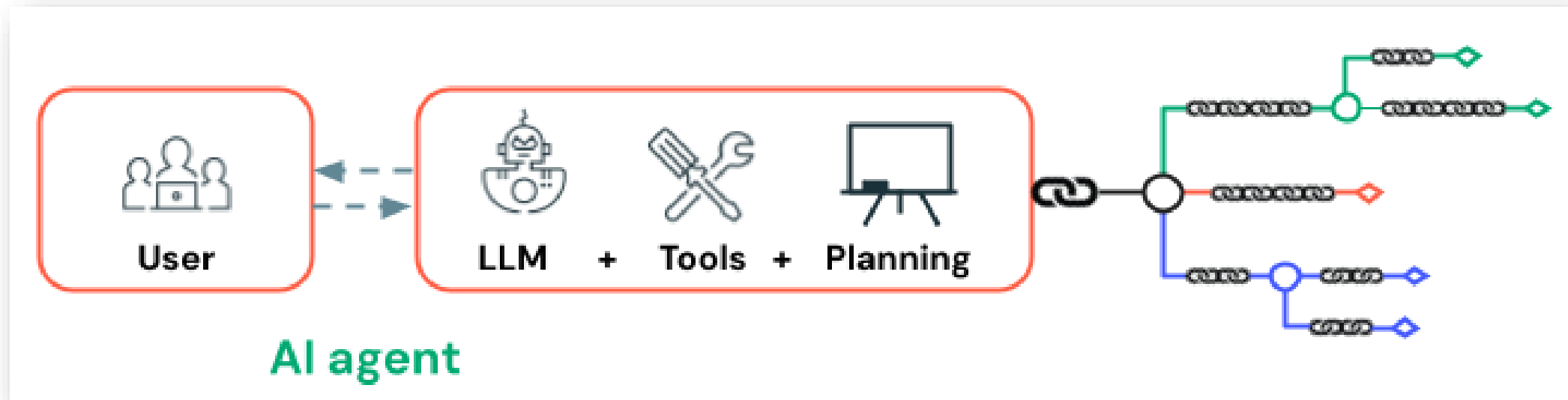
Level 3: Taking actions

Collaborate and solve problems

Take actions

Answer grounded questions

Answer General questions



semantic engine (Model)

Memory

Tools, functions to
execute actions

Knowledge

Level 3: Agent taking actions

Collaborate and solve problems

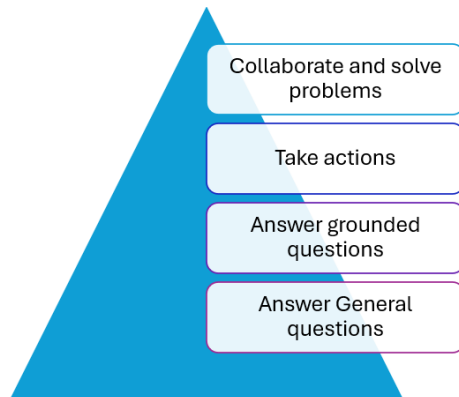
Take actions

Answer grounded questions

Answer General questions



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

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



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