AgentCamp

03 March 2026

2:30 PM – 5:30 PM CST

Reggio Emilia, Italy

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An event by the: global AI community

Sponsored by:

AgentCamp

Developing Multimodal Agents: A Hands-On Workshop with Microsoft Foundry & AI Toolkit

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Sergio Mancini

Software Engineer

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Agenda

AI Toolkit (AITK)

AI Toolkit Model Catalog

Enhancing Context

Building the Agent with Agent Builder

Manually Evaluate Your Agent Responses

AI Toolkit (AITK)

What Is AI Toolkit (AITK)?

AI Toolkit (AITK) is an extension for Visual Studio Code that provides a unified interface to access and interact with multiple AI models and services.

What does it enable?

- Explore and compare AI models from different providers
- Use both proprietary and open-source models
- Access models hosted on GitHub, Microsoft Foundry, or locally
- Integrate model selection, prompt engineering, and agent prototyping
- Test everything directly within your code editor

https://code.visualstudio.com/docs/intelligentapps/overview

AI Toolkit Model Catalog

AI Toolkit – Model Catalog

The Model Catalog in AI Toolkit allows you to discover, filter, and compare AI models for your multimodal agent project.

It provides access to models from leading providers such as **OpenAI**, **Mistral AI**, **GitHub**, and **Microsoft Foundry**, including both **open-source** and **proprietary** options.

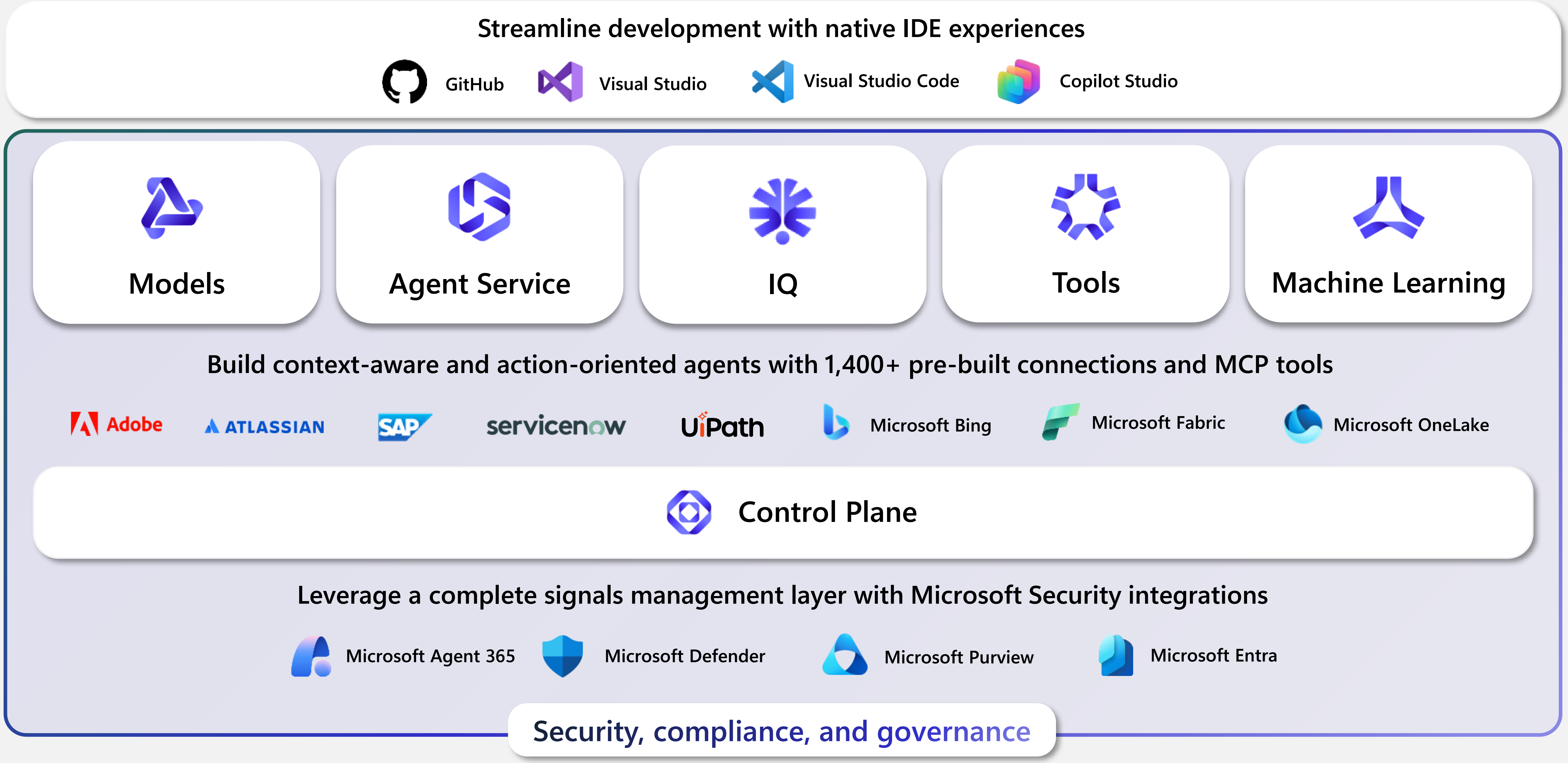
What you can do

- Filter models by Publisher
- Filter by Capabilities (e.g., multimodal support, tool calling)
- Identify models that support image input and multimodal interactions
- Test and compare models directly in the Playground

How to Evaluate Models

- Response quality and level of detail
- Processing speed
- Output clarity and formatting
- Token usage and cost implications

Microsoft Foundry



Streamline development with native IDE experiences

GitHub · Visual Studio · Visual Studio Code · Copilot Studio

Models · Agent Service · IQ · Tools · Machine Learning

Build context-aware and action-oriented agents with 1,400+ pre-built connections and MCP tools

Adobe · ATLASSIAN · SAP · servicenow · UiPath · Microsoft Bing · Microsoft Fabric · Microsoft OneLake

Control Plane

Leverage a complete signals management layer with Microsoft Security integrations

Microsoft Agent 365 · Microsoft Defender · Microsoft Purview · Microsoft Entra

Security, compliance, and governance

Enhancing Context

Enhancing Context

Enhancing context means improving your model's performance by combining **effective prompt engineering** with relevant contextual data. This step is essential to tailor the model to your specific business scenario.

Define a Strong System Message

The system message sets the model's role, behavior, and expectations.

- Be clear and specific about the objective
- Provide relevant background information
- Define constraints such as format, tone, or length
- Break down complex tasks into structured instructions

Validate with Context & Multimodal Input

Test the model using contextual data (e.g., file attachments or images) to ensure responses are accurate and relevant.

- Context improves response quality
- Multimodal inputs validate real-world performance
- Keep grounding data concise and within token limits

Building the Agent with Agent Builder

Building the Agent with Agent Builder

You can create and configure your agent using **Agent Builder** within the AI Toolkit, enabling it to generate responses and interact with external tools.

Configure the Agent

Agent Builder provides a two-panel interface:

- **Configuration panel** (name, model, instructions, tools)
- **Testing panel** (chat and evaluation)

Select a model (e.g., via **Microsoft Foundry**) and define clear system instructions to shape the agent’s role, tone, and behavior.

Connect External Tools

Enhance your agent by integrating tools through:

- **Model Context Protocol** (MCP) servers for dynamic, real-time data
- **Custom Function Tools** for tailored functionality

This allows the agent to securely access external data or perform specific actions beyond static files.

Manually Evaluate Your Agent Responses

Manually Evaluate Your Agent

Manually evaluating your agent’s responses helps ensure they are accurate, relevant, and clear. This process involves humans **reviewing outputs** and assessing their quality.

Setting Up Evaluation

Manually assessing your agent’s responses ensures they are accurate, relevant, and clear.

- Add **variables** (e.g., `{{product}}`) to instructions for dynamic testing across contexts
- Maintain the agent’s core purpose while varying inputs

This approach allows structured evaluation of the agent’s behavior in different scenarios.

Running and Reviewing Data

Provide evaluation data by:

- **Manual entry** of User Queries and variable values
- **Synthetic data generation** using AI
- **CSV import** of bulk datasets

Run the dataset in Agent Builder, review each response, and use **thumbs up/down** to judge quality. This helps refine the agent for accuracy, relevance, and practical performance.