

AI Insights and Application in the Industry



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Agenda



Quick Introduction

AI Insights



RAG – Retrieval Augmented Generation

Introduction and Industry Use Cases



AI Agents

Introduction and Industry Use Cases



Next Steps

Exploring and Learning AI

The future of AI is here



AI is **reshaping**
our **world**.

Not in years. Not in months.
Right now.



Making the **impossible**
now **possible**.

From natural language to visual
understanding.



AI is **redefining**
enterprise **capability**.

From cost center to strategic
differentiator.

Generative AI trends

93%

organizations are experimenting with multiple models¹

75%

responsible AI users reported improvements in customer experience and trust³

50%

enterprises using generative AI will launch agentic AI pilots by 2027²

30%

or fewer generative AI experiments moved to production⁴

1. [16 Changes to the Way Enterprises Are Building and Buying Generative AI | Andreessen Horowitz](#)
2. [Autonomous generative AI agents | Deloitte Insights](#)

3. [Trust in artificial intelligence – 2023 Global study on the shifting public perceptions of AI, KPMG](#)
4. [GenAI and the future enterprise | Deloitte Insights](#)



1B

New applications built
over the next 24-36
months

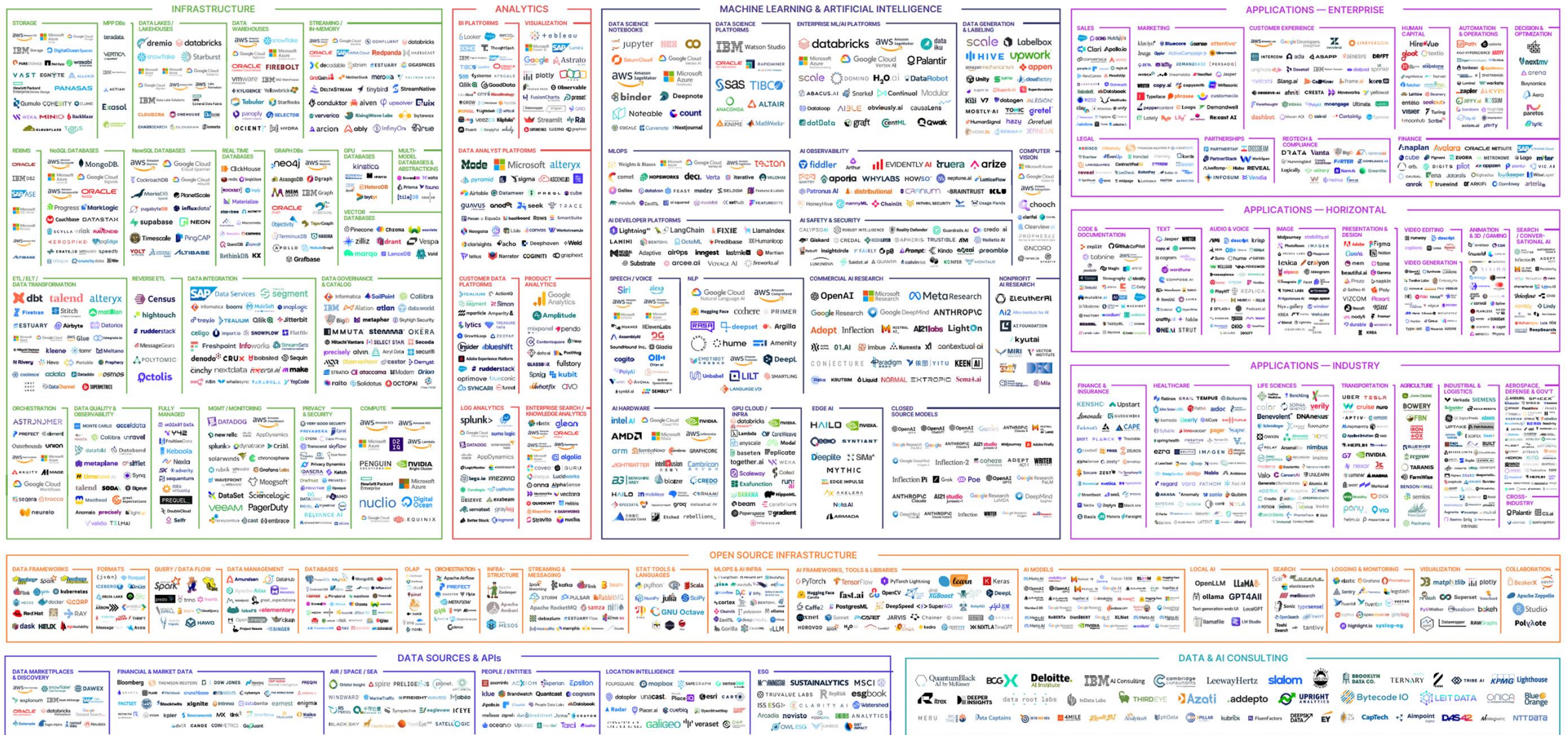
70%

Organizations
**accelerating app
modernization** to bring
AI into existing apps

90%

Developers **using AI** in
their toolset

The Data and AI landscape



Azure AI Foundry



Copilot Studio



Visual Studio



GitHub



Azure AI
Foundry SDK



Model Catalog

Foundational models

Open-source models

Task models

Industry models



Azure
OpenAI Service



Azure
AI Search



Azure AI
Agent Service



Azure AI
Content Safety



Azure Machine
Learning

Evaluations

Customization

Governance

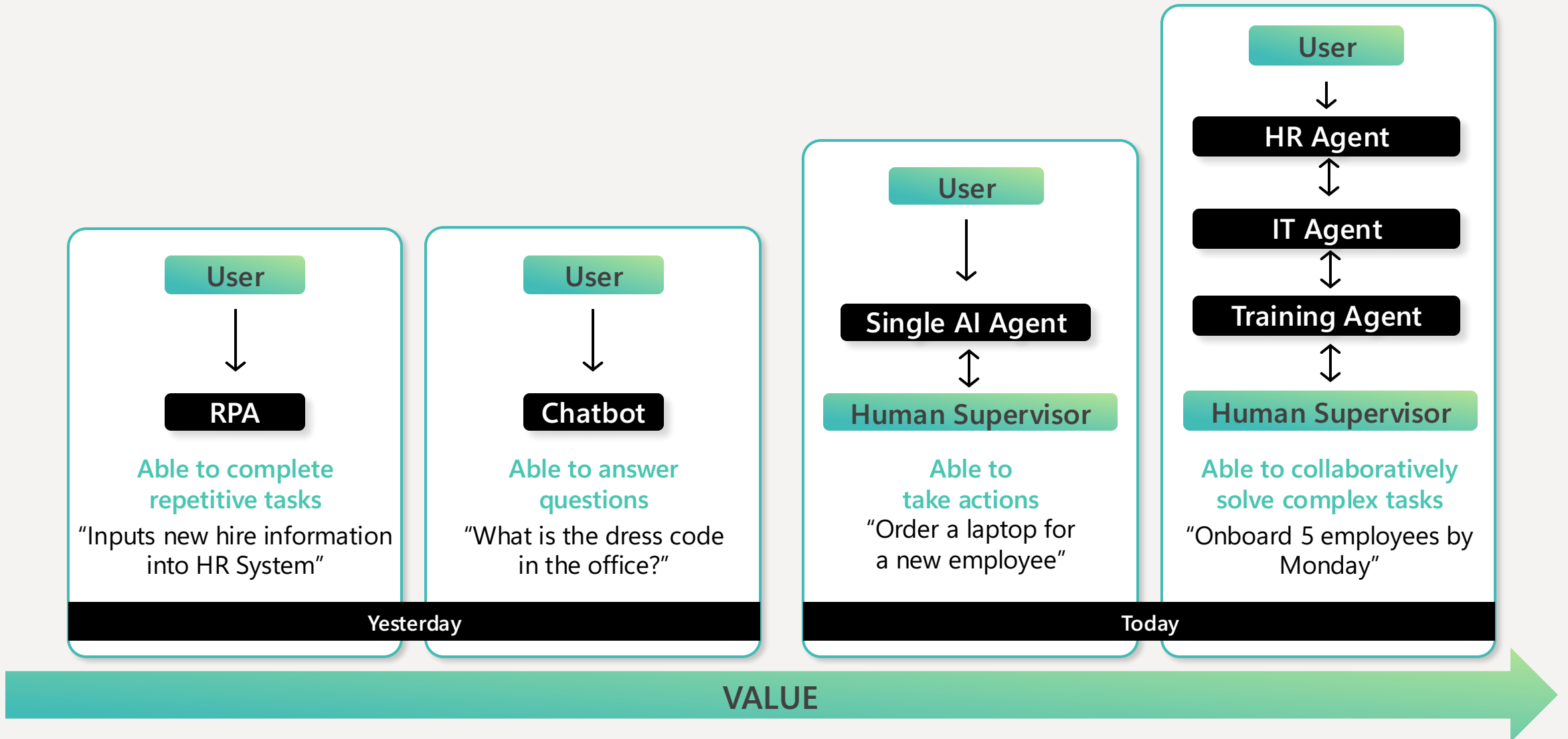
Monitoring

Observability

Demo - AI

The background features a diagonal line that runs from the bottom-left towards the top-right. The line is a vibrant orange-red color. To the right of this line, there is a large, curved area filled with a gradient of colors, transitioning from a light pinkish-purple at the top to a deeper magenta and then to a bright orange-red at the bottom, matching the line's color.

Evolution of AI capabilities and automation



RAG - Retrieval Augmented Generation



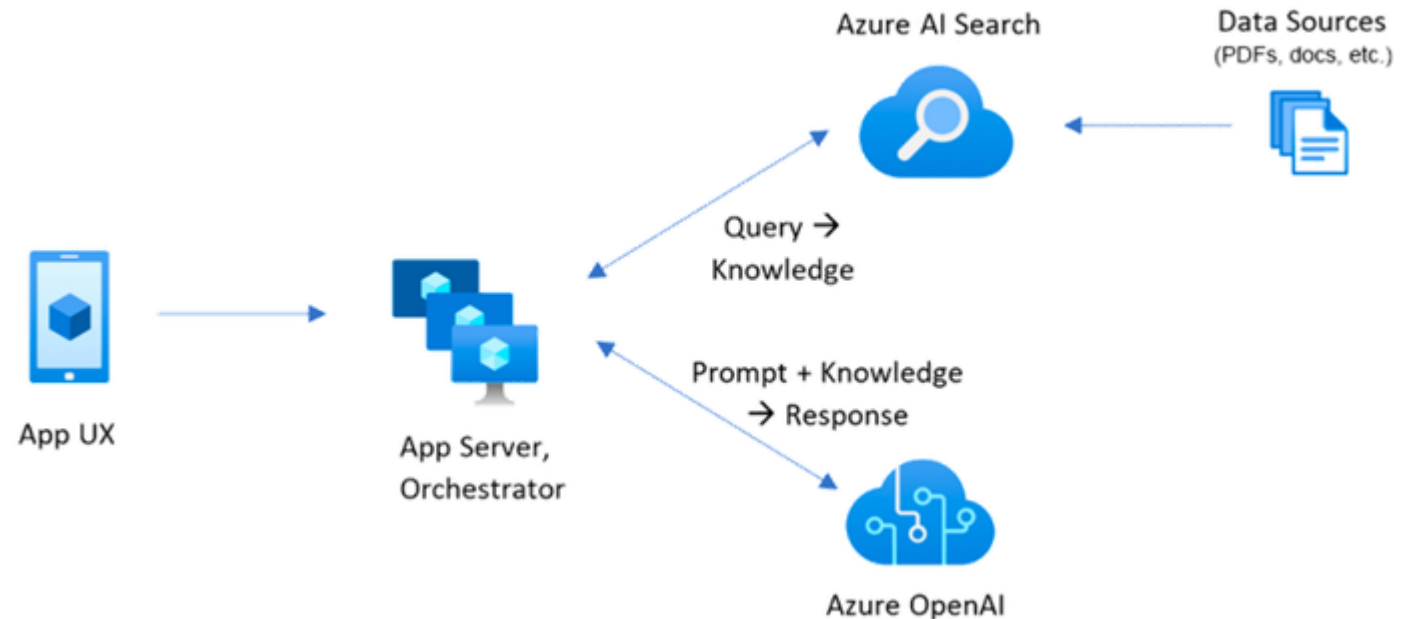
RAG & First wave of generative AI Apps

RAG

- Primary technique for grounding
- Process for retrieving information relevant to the task, providing it to the LLM along with a prompt, and relying on the LLM to use this specific information when responding.
- Powerful and easy-to-use technique for many use-cases.

First wave Use Cases

- Conversational chat on private data
- Text/Document/Audio summarization and classification
- Image description and entity extractions
- Personalized content generation



What are the key consideration to build the RAG system?

1. Data Preparation

- Understanding Data Sources
- Data Ingestion
- Data Chunking
- Data Versioning

2. Vectorization & Indexing

- Efficient Vector Indexing
- Hybrid Search Strategies
- Embedding Models

3. LLM & Prompt Optimization

- LLM Models
- Prompt Engineering
- Context Optimization
- Memory & Personalization

4. Orchestration & Workflow

- Orchestration Framework
- APIs
- Response Evaluation

5. Security & Compliance

- E2E Solution Security
- Prompt Security / Sanitization
- AI Content Filtering
- Regulatory Compliance

6. Cost & Performance Optimization

- Latency Optimization
- Token Usage Control

7. Responses Evaluation & Monitoring

- Automated Metrics Tracking
- User Feedback Loop

8. UI / UX & User Interaction

- UI / UX Design

9. Infrastructure

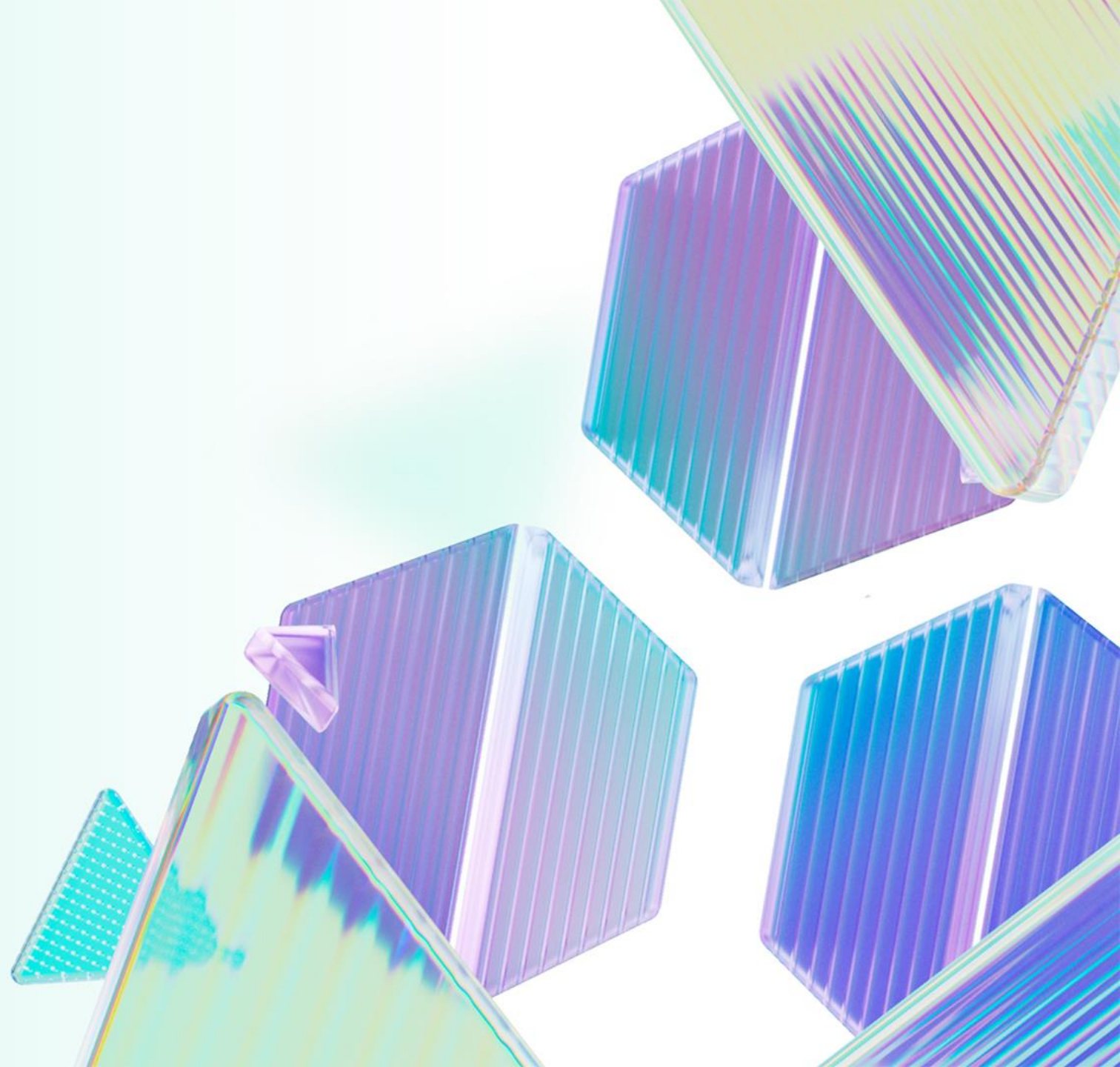
- Environment Sizing
- Monitoring
- DevOps (CI/CD)

Demo - RAG





AI Agents



Agents

Complex interactions & orchestration

- Virtual assistants
- Customer support
- Intelligent code editors

Tools calling

Many LLM tasks + steps
undefined sequence = agentic
reasoning

Improve efficiency and accuracy

Ask a question on a topic?

Do web search? First draft response.
Need more research?
Do revision on response.
Iterate for more details?
Revise, act and respond.

Agentic Reasoning



Agent frameworks and services



[Semantic Kernel Agent Framework](#)



[Autogen](#)



[Langgraph](#)



[Azure AI Agent Service](#)

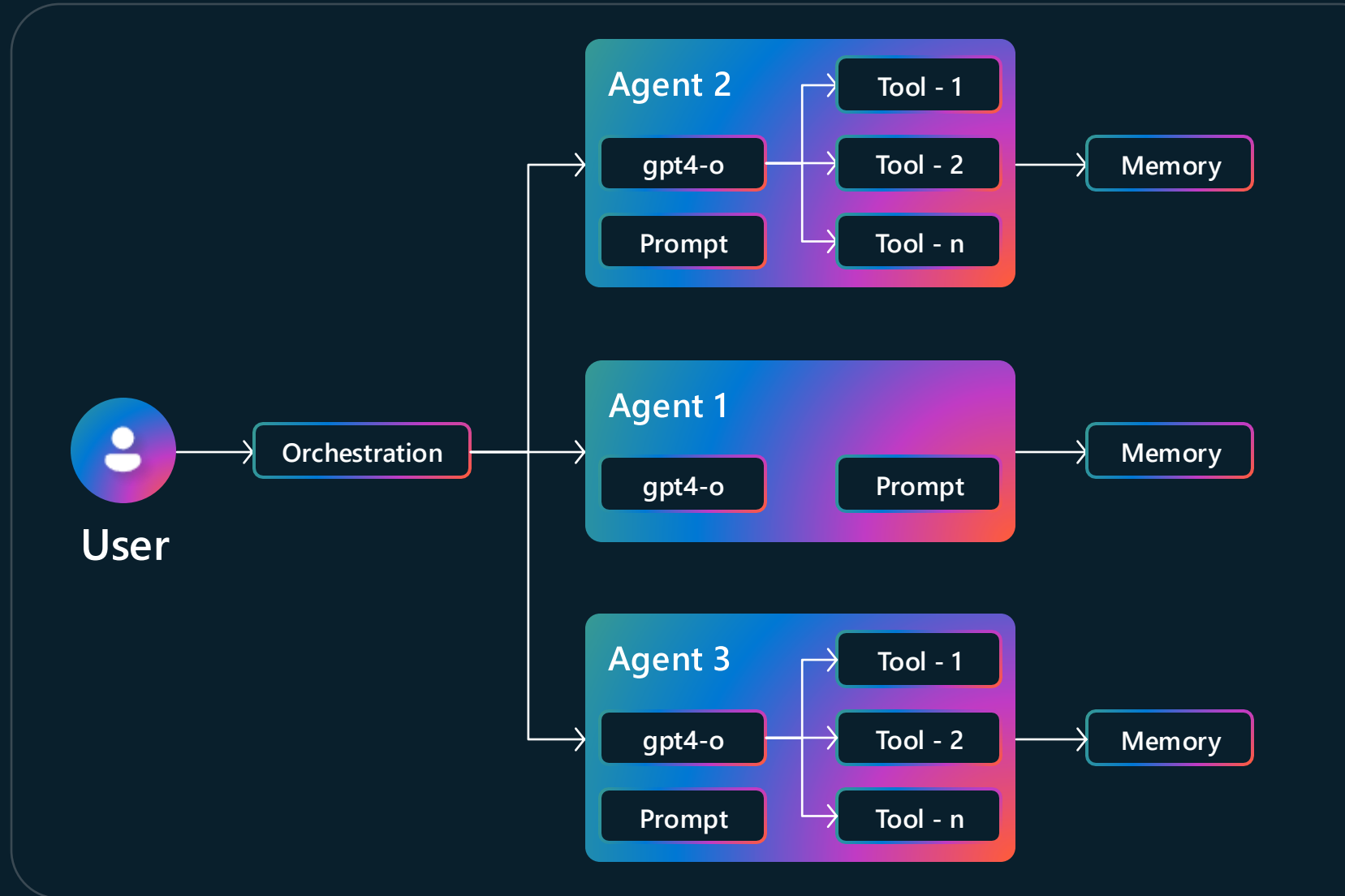
Multi Agent Logical Architecture

Each agent is specialized in different tasks or aspects of a problem

Agents can communicate and coordinate with each other. Structured orchestration is crucial

2 primary categories based on orchestration types

- Vertical Architecture
- Horizontal Architecture





"We are using Microsoft's Semantic Kernel and Azure AI Agent Service to orchestrate multiple specialized AI agents and an orchestrator AI to coordinate them to answer questions as a team"

Hiroataka Ito,
Lead Developer, Fujitsu Limited



| INTELLIGENT AUTOMATION

Business Goal

Fujitsu continues to push innovation to enhance productivity and operational efficiency. Addressing inefficiencies in its sales processes, Fujitsu targeted automating the time-intensive task of generating sales proposals.

Technology Solution

Fujitsu developed an intelligent, scalable AI agent for sales automation. The AI-driven agent interprets user inputs, integrates data from multiple sources, and produces precise, up-to-date proposals in a fraction of the time. At the solution's core is Fujitsu Kozuchi Composite AI, powered by Semantic Kernel, a tool that orchestrates multiple specialized AI agents. These agents dynamically retrieve and synthesize knowledge from scattered internal sources, ensuring proposals are tailored and data-driven.

Key Products

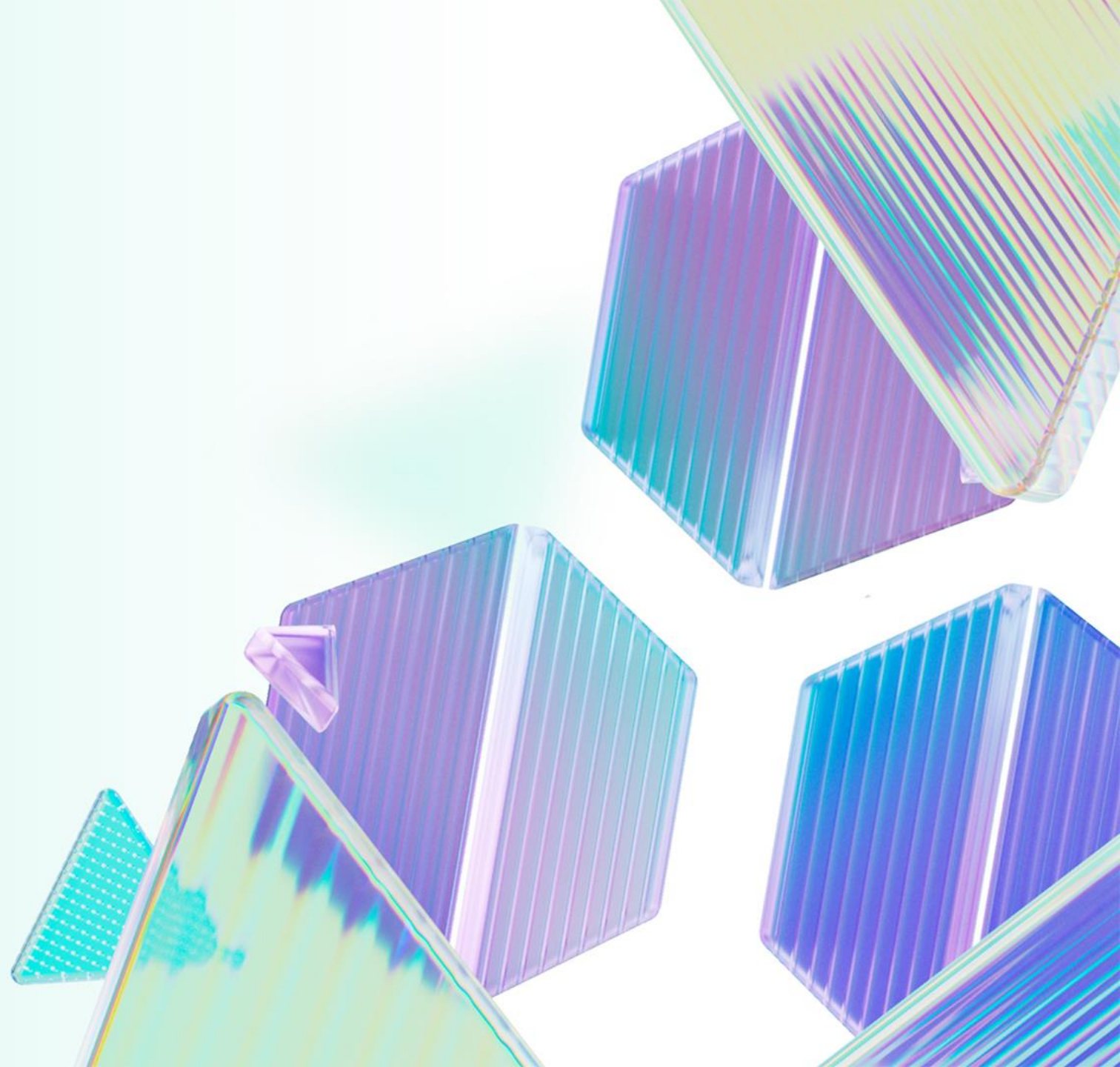
Semantic Kernel
Azure AI Agent Service
Azure AI Search
Azure AI Foundry

Impact


Sales proposal creation productivity boosted by 67%, saving countless hours to focus on customer engagement.



Demo - Agent



Perth Microsoft Data, Analytics, AI and Power Platform



Q Search events

Perth, AU

Q

Start a new group

English Log in Sign up



Part of **Azure Data Tech Groups** - 135 groups

Perth Microsoft Data, Analytics, AI and Power Platform

★ 4.6 586 ratings

Perth, Australia

2,276 members · Public group

Organized by **Sabrina Da Motta Zenatti** and 2 others

Share:     

About Events Members Photos Discussions

Request to join

...

What we're about

Welcome to the official Microsoft Data, Analytics, AI, and Power Platform User Group in Perth! Our group is dedicated to fostering connections among enthusiasts who share a passion for data, artificial intelligence, and the power platform. Join us as we explore and exchange knowledge on Microsoft Fabric, Azure Databricks, Azure Synapse, Azure Data Factory,

Organizers



Sabrina Da Motta Zenatti and 2 others

Message

Members (2,276)

See

https://www.meetup.com/perth-microsoft-data-and-analytics-user-group/



Skilling Offerings for Innovate with Azure AI Platform

Plans on MS Learn



Curated sets of content, designed to help individuals and teams achieve specific learning outcomes. With built-in milestones, sharing capabilities, reporting, and optional email reminders to efficiently guide learners towards their goals.

Level: Beginner, Intermediate, Advanced (100-300)

When to use: Customer training resources to focus on specific training area.

Audience: 1:1, Field, Customers, Partners

Approach: Self-paced

Duration: 12-15 hours

- https://aka.ms/ADAI_OpGenAISols_Plan
- https://aka.ms/ADAI_DevGenAIExp_Plan
- https://aka.ms/ADAI_OptlGenAIMod_Plan
- <https://aka.ms/StartTransformingBizAI>

MS Learn Learning Paths / Modules



Free skilling content across Azure products with step-by-step guidance, interactive content.

Level: Beginner, Intermediate, Advanced (100-300)

When to use: Customer training resources to focus on specific training area

Audience: 1:1, Field, Customers, Partners

Approach: Self-Paced

Duration: 25 mins to 90+mins

[Browse learning paths, and modules](#)

MS Learn Challenges



Free interactive learning through task-based achievements, to help advance technical skills while earning achievements and/or preparing for Microsoft role-based certifications.

Level: Beginner, Intermediate, Advanced, Expert (100-400)

When to use: Customer events or campaign (moment in time activity)

Audience: Customers

Approach: Gamified learning

Duration: Length of event or campaign

<https://aka.ms/aitourchallenge>

Virtual Training Days



Pre-recorded large-scale training to support skilling. Always on training opportunity with direction for content, audience and agenda.

Level: Beginner, Intermediate, Advanced, Expert (100-400)

When to use: depth outreach to customers, increase connection to Microsoft

Audience: IT Pro/Developer

Approach: 1st party field hosted and executed; Corp produced recordings with live Q&A. 500 – 2k Per event.

Duration: 2-day simu-live event with 3 hours content per day

- [AI Fundamentals](#)
- [Develop Your Own Custom Copilots with Azure AI](#)

Credentials



Including **Certifications** and **Applied Skills**. Challenges that demonstrate and validate your expertise. Earn globally recognized and industry-endorsed credentials and showcase them to your network.

Level: Beginner, Intermediate, Advanced (100-300)

When to use: 1:1, T1/Flagship events, trainings, VTDs

Audience: 1:1, Field, Partners and Customers

Approach: Instructor-led, Self-Paced, includes Performance-Based Testing through dedicated Azure Tenant

Duration: 60 mins to 90+mins per module within the certification learning path

[Browse Credentials](#)

Links to resources requested

Azure Free Account

See on the link below a list of products that are free up to the specified monthly amounts. Some are always free to all Azure customers, and some are free for 12 months to new customers only.

<https://azure.microsoft.com/en-au/Free#all-free-services>

MCP (Model Context Protocol)

MCP is an open standard that enables developers to build secure, two-way connections between their data sources and AI-powered tools.

<https://techcommunity.microsoft.com/blog/educatordeveloperblog/unleashing-the-power-of-model-context-protocol-mcp-a-game-changer-in-ai-integrat/4397564>

Azure AI Landing Zone Reference Architecture

When deploying AI services such as Azure OpenAI, using a Landing Zone approach helps you manage your resources in a structured, consistent manner, ensuring governance, compliance, and security are properly maintained.

<https://techcommunity.microsoft.com/blog/azurearchitectureblog/azure-openai-landing-zone-reference-architecture/3882102>

Azure AI sample solutions, SDKs and templates

There are many sample code, details on how to use SDKs available on the link below.

<https://github.com/Azure-Samples/azure-ai>

Q&A

Thank you!



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