

Microsoft Fabric Data Agents

Agentic Applications for Unified Data Foundation

Microsoft Fabric

Azure Al Foundry

Semantic Kernel

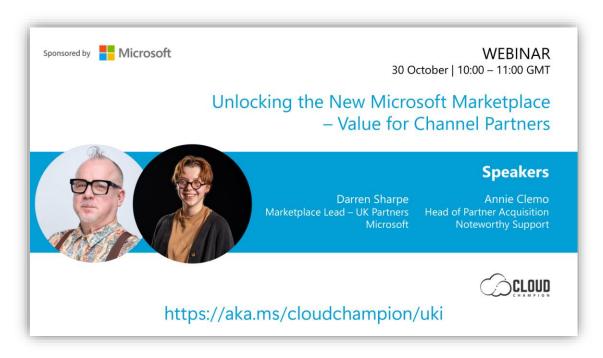


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Upcoming Cloud Champion Webinars







30th October 2025

5th November 2025

https://aka.ms/cloudchampion/uki

Overview

Accelerate decision making at scale with secure, agentic AI built on a unified data foundation that unlocks new insights and boosts agility to generate value faster.



As business demands rise, leaders see agents as the way forward.





Of leaders say productivity needs to increase.

Of leaders expect to use agents to meet the demand for more workforce capacity.

Organizational trends







50% of companies using generative AI will launch agentic AI pilots by 2027.

Companies want to know how to realize and measure business value, scale solutions, and define their North Star. 64% of organizations struggle to change the way they operate, falling behind on building a robust data foundation to support Al.

Source: Deloitte

Source: Accenture Newsroom

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How can we realize and measure business value?



*20 – 35%

*20 – 35%

*20-45%

^{*} Measurable efficiency gains driven by agent integrations

Business outcomes

Achieve goals faster by enabling secure, agentic Al experiences.

A unified platform

To secure and govern your data estate, replacing the typical 10+ fragmented tools with one solution.



Intelligent Data Interaction

Enable conversational agents that understand your company's unique data and transform natural language questions into automated queries for data-driven answers. Train agents with instructions to gain visibility.



Accelerated Insights & Productivity

Access rapid insights with intelligent data prep, seamless integration, and Al-guided exploration. Analyze, and enrich data to uncover trends, automate workflows, and turn ideas into scalable, agentic solutions.



Governed, Scalable Value

Deliver actionable insights through robust governance and metadata. Improve decision-making, operational efficiency, and reduce costs with secure, self-service access to high-quality data in a unified platform.

A Fortune 500 enterprise transforms operations with Agentic AI in Fabric and Azure AI Foundry.

"

Microsoft Fabric data agents form the conversational layer. Using Fabric and Azure Al Agent Service we've built agents that allow us to talk to our data, ask personalized questions, and uncover insights based on role or function."

50%

Faster time to market



Employee outcomes

Technical roles



Accelerated agent workflows – Extendible agent orchestration empowers teams to automate routine tasks and rapidly build intelligent workflows, boosting speed and innovation without starting from scratch.



Enriched data analysis – Natural language querying across enterprise datasets enables users to uncover insights without dashboards, accelerate decision-making, and make governed data accessible to all.

Business roles



Save time – Reduce hours of manual data consolidation and free up time for more strategic analysis.



Improve decision making – Receive instant access to holistic insights to streamline decision making.



Source actionable insights – Gather contextualized insights from mined data to quickly solve challenges and take action.



Use interactive data insights – Query your data and receive timely responses to better understand insights and enhance problem solving.

10

Scenario

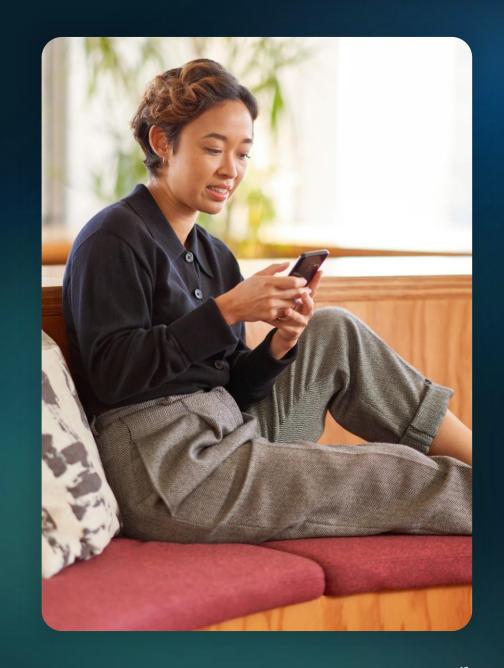
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Scenario

Let's imagine **Contoso**, a large enterprise that wants to stay competitive by adopting Agentic Al built on unified data. Their previous systems were fragmented, resulting in slow execution. They've recently invested in modern tools like Fabric, Azure Al Foundry, and Semantic Kernel to simplify data analysis and streamline decision making.

Claudette, a Data Engineer, just configured a new web app that uses agentic features. The automated data set-up minimized repetitive steps, and the prompt customization helped enhance the Al chat outputs.

Roberto, a Sales Analyst, opens the web application to gather insights for an upcoming performance report. He activates the AI chat and queries the data for specific insights, saving ample preparation time. He migrates these results in a shared file to collaborate with other roles.

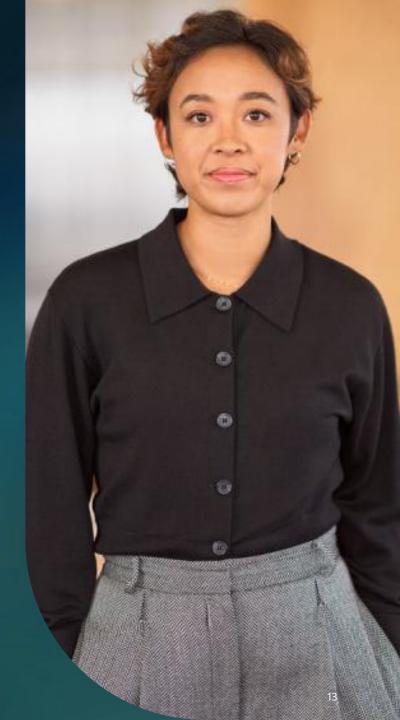




I want one portal that enables secure, agentic workflows and helps me to streamline decisions across teams. I need features that allow me to combine a unified data platform and agentic AI with governed, high-quality data and custom AI chat instructions."

Claudette Mukarukundo

Contoso Data Engineer





I want a unified view of sales and customer data with AI chat features to make fast, informed decisions that sharpen strategy, reduce guesswork, and reveal new insights to drive revenue."

Roberto Hilario

Contoso Sales Analyst



User Journey – Intelligent orchestration to agentic insights

Add Agentic features from data estate

Once your data foundation is unified, you can deploy Agentic experiences using Azure SQL—no need to go through Fabric. You'll have access to start quickly.

Automated deployment

Define reference tables, create prompt instructions, publish, set up orchestration. Time is saved from hours of manual effort to minutes.



2

Sales Analyst

Open web app





Validate the agent and deployment

3

Data Engineer



5

Product performance

Queries around best product
performance across regions

6

Purchase activity
Inquires around increased
purchase activity by customer tier

7

Order total trends
Requests line chart showing average total by month over past year

New insights and time saved The Sales Analysts gains fast, actionable insights to drive operational improvements.

And the path to successful AI application development is grounded with Enterprise data

Build custom AI experiences grounded with your data





Integrate disparate data sources into a unified data platform and data lake with built-in data governance and security





Prepare data for Al innovation



Improve the quality of your data, to ensure it is complete, accurate, and governed





Create data agent(s) for AI development



Leverage a seamless and accelerated path to your Al application development



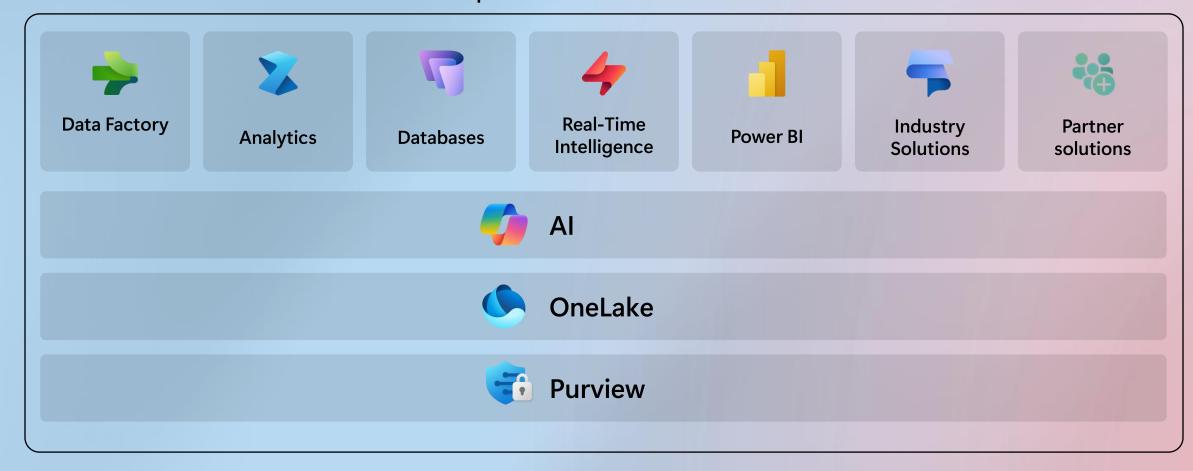
Enhance the breadth and depth of datadriven experiences by creating agentic and autonomous Al solutions



Microsoft Fabric

https://roadmap.fabric.microsoft.com

The unified data platform for AI transformation





Chat with your data

- Collection of experiences where AI-powered assistants answer questions over data in OneLake
- Allows users to interact with structured and unstructured data using conversational language
- Seamlessly integrated with Microsoft ecosystem for easy access

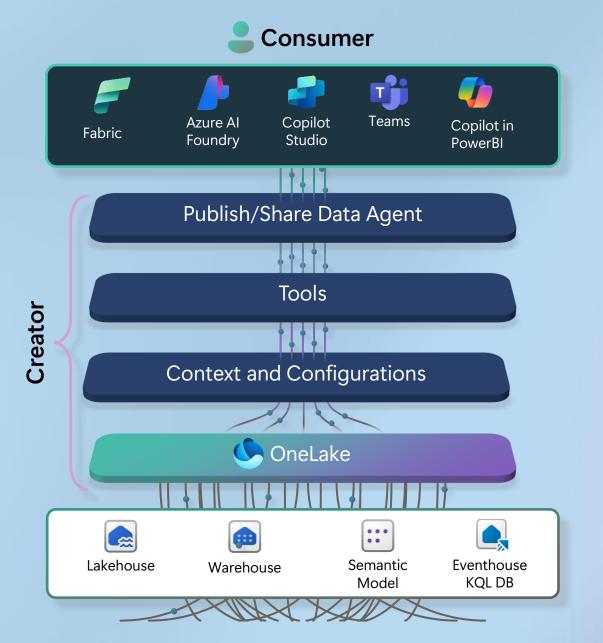
Fabric Data Agents

Experiences in Copilot in Power BI

Public Preview

Public Preview

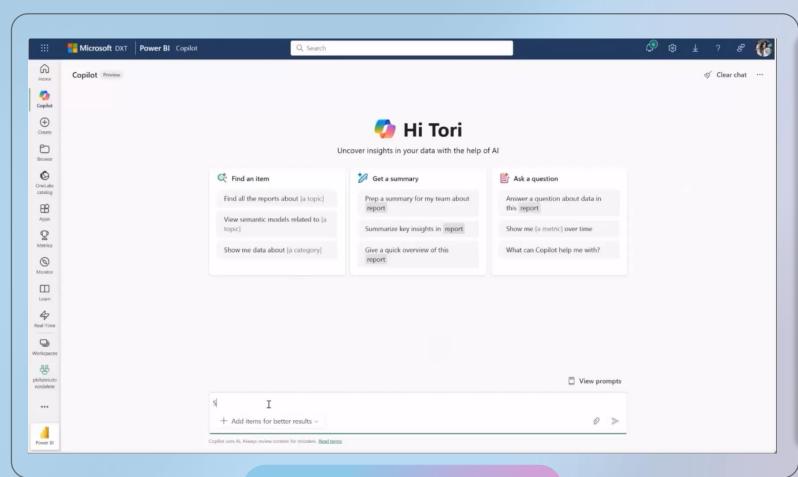
Fabric data agents



- The conversational data agent allows users to interact and analyze data with natural language, enhancing accessibility and usability.
- Chat canvas for creators with **new debugging** capabilities, making it easier to understand and refine responses.
- Seamlessly reason over multiple data sources, including Data Warehouse, Lakehouse, Semantic models and Eventhouse KQL databases, to create a powerful Data Expert tailored to your data domain.
- Your Data Agent can be consumed inside and outside of Fabric. Stay tuned for upcoming integrations with your own custom applications.

Explore data more effectively with Copilot in Power BI

A new full-screen Copilot experience that enables chat across all your data



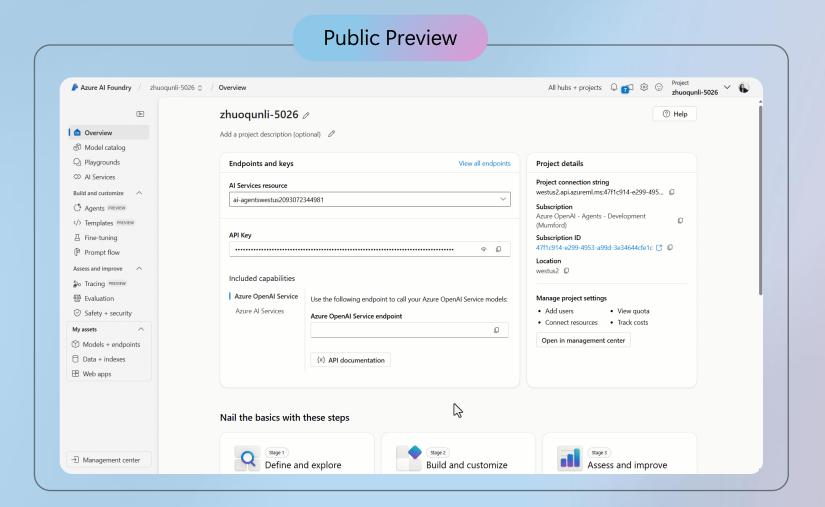
Find, summarize, and analyze data across multiple reports, semantic models, apps, and data agents

Business users in Power BI can now chat with data agents without switching context

Lays foundation for upcoming integration of the Power BI agent with M365 Copilot Chat

Fabric integration with Azure Al Foundry

Build accurate, relevant, and context-aware multi-agent solutions



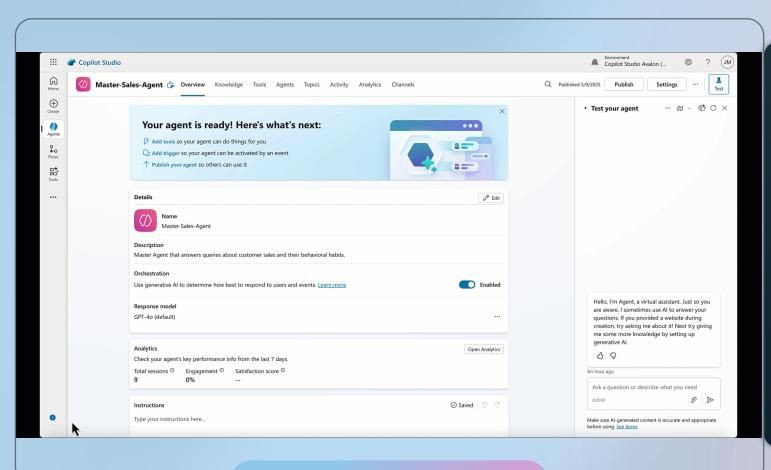
Fabric data agents can reason over and synthesize data in OneLake for insights

Al creators can enrich Al agents in Azure Al Agent Service with Fabric data agents' expertise

Security permissions, including RLS and CLS, are respected

Fabric data agent integration with Copilot Studio

Enrich custom copilots with Fabric data expertise



Fabric data agents can reason over and synthesize data in OneLake for insights

Al creators can enrich custom copilots in Copilot Studio with Fabric data agents' expertise

Security permissions, including RLS and CLS, are respected

PowerBI Copilot vs Fabric Data Agent

PowerBI Copilot vs Fabric Data Agent

Feature / Capability	Power BI Copilot	Fabric Data Agent
Purpose	Al assistant embedded in Power Bl for report creation, DAX generation, and Q&A	Custom conversational agent for querying multiple Fabric data sources
Primary Use Case	Enhancing productivity in Power BI (e.g., generating visuals, summaries, DAX)	Building tailored Q&A experiences across lakehouses, warehouses, semantic models
Data Sources	Power BI semantic models and reports	Lakehouses, warehouses, Power BI semantic models, KQL databases
Customization	Limited to Copilot settings and semantic model prep	Highly customizable with agent instructions, terminology, and query logic
User Experience	Embedded in Power BI UI (report pane or full-screen Copilot)	Standalone agent interface or embedded in Copilot Studio or Power BI
Security & Governance	Inherits Power BI permissions and RLS/CLS	Enforces read-only access, supports RLS/CLS, and follows Fabric security policies

Feature / Capability	Power BI Copilot	Fabric Data Agent
Preview Status	Some features are GA (e.g., report pane), others in preview	Currently in preview
Setup Requirements	Enabled in Power BI workspace with Fabric capacity	Requires Fabric capacity (F2+), tenant settings enabled, and data sources configured
Best For	Business users and analysts working within Power BI	Organizations needing tailored, multi-source Q&A experiences across Fabric

PowerBI Copilot vs Fabric Data Agent

Key Differences

- •Power BI Copilot is designed to assist users within the Power BI environment—helping with report creation, DAX generation, and natural language Q&A based on semantic models.
- •Fabric Data Agent is a more flexible and powerful tool for building custom conversational experiences that span multiple data sources in Fabric. It allows you to define how the agent interprets queries, which sources to prioritize, and how to respond.

Click-through demo

Enters web app

Contoso | Unified Data Analysis Agents Show Chat History Chat

*

Start Chatting

You can ask questions around sales, products and orders.

 \bigoplus











Assess product performance

Contoso | Unified Data Analysis Agents

Chat

Show Chat His

The 3 products that have performed the best across all regions are:

- 1. LL Road Frame Black, 48, with a total quantity sold of 99.
- 2. Touring-3000 Yellow, 50, also with a total quantity sold of 99.
- 3. Mountain-500 Black, 52, with a total quantity sold of 95.

Al-generated content may be incorrect

What 3 products have performed the best across all regions?

















Assess product performance

Contoso | Unified Data Analysis Agents

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Show Chat His

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What 3 products have performed the best across all regions?

















View customer purchase activity Contoso | Unified Data Analysis Agents Show Chat His Chat What 3 products have performed the best across all regions? The 3 products that have performed the best across all regions are: 1. LL Road Frame - Black, 48, with a total quantity sold of 99. 2. Touring-3000 Yellow, 50, also with a total quantity sold of 99. 3. Mountain-500 Black, 52, with a total quantity sold of 95. What customer tier showed increased in purchase activity over the last 6 months? Over the last 6 months, the customer tier that showed increased purchase activity is the 'Individual' tier, which had a total of 98 orders and a total purchase amount of \$639,673.53. Al-generated content may be incorrect Ask a question...













View order total trends

Contoso | Unified Data Analysis Agents

Chat

Show Chat His

The 3 products that have performed the best across all regions are:

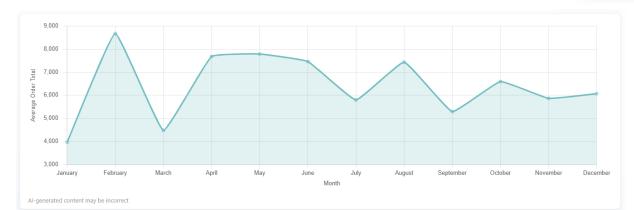
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What customer tier showed increased in purchase activity over the last 6 months?

What 3 products have performed the best across all regions?

Over the last 6 months, the customer tier that showed increased purchase activity is the 'Individual' tier, which had a total of 98 orders and a total purchase amount of \$639,673.53.

Generate a line chart showing the average order total by month over the past year



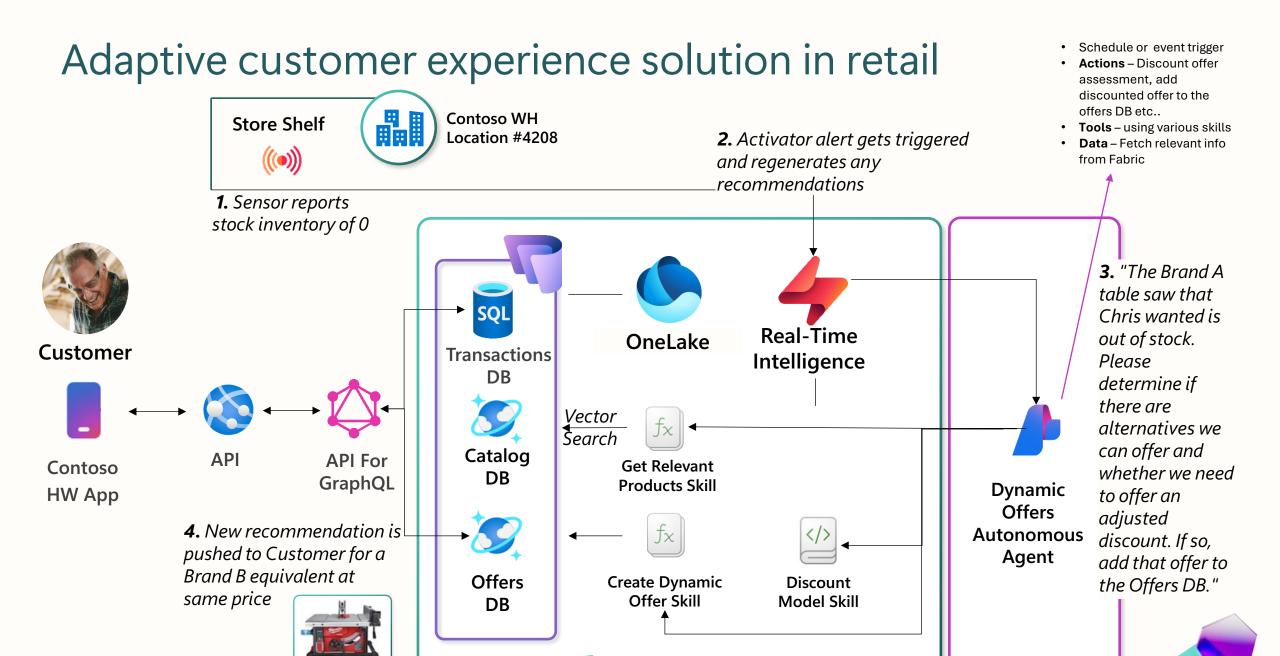












Microsoft Fabric

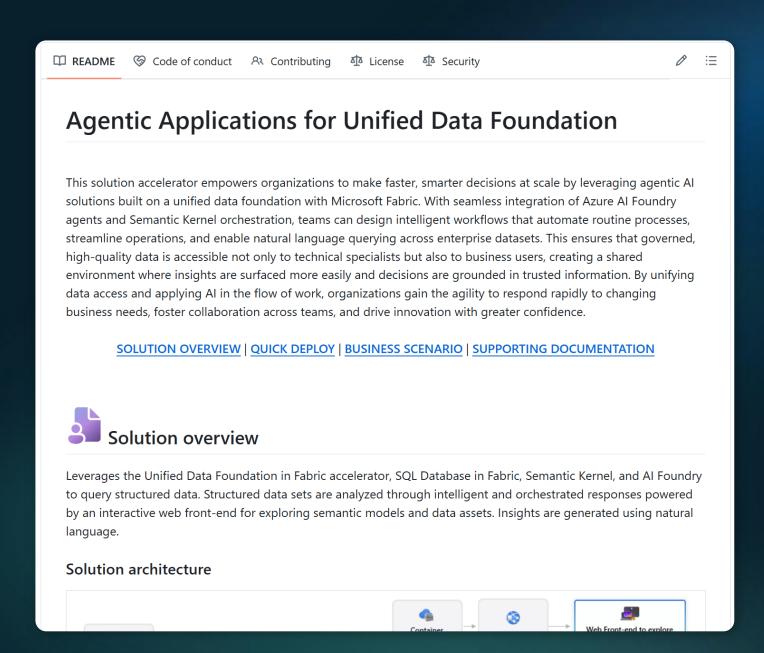
Reference docs

- https://learn.microsoft.com/enus/fabric/data-science/data-agentconfiguration-best-practices
- https://learn.microsoft.com/en-us/power-bi/create-reports/copilot-evaluate-data
- https://learn.microsoft.com/enus/fabric/data-science/consume-dataagent-python?tabs=windows%2Cvariables
- https://learn.microsoft.com/enus/fabric/data-science/evaluate-dataagent
- https://blog.fabric.microsoft.com/en-US/blog/fabric-data-agents-microsoftcopilot-studio-a-new-era-of-multi-agentorchestration/

GitHub repository

Access the GitHub repo to deploy this solution accelerator

GitHub repo



Agentic Applications for Unified Data Foundation

Thank you

