



Spotfire accelerates visual data science with Azure AI Foundry

90%

**FASTER GENERATED
VALUE FOR NEW
USERS**

Executive summary

Enterprises struggle to rapidly access and interpret complex data, with even skilled users facing steep learning curves. Spotfire aims to help enterprises quickly access and analyze their data, resulting in faster and more informed decision making.

Spotfire selected Microsoft Azure AI Foundry and Azure OpenAI Service to create an intuitive, conversational analytics platform. Multimodal capabilities in Azure incorporate natural language and visual elements, simplifying complex tasks.

As a result, tasks previously taking days or weeks can now be completed in minutes, significantly enhancing productivity, accelerating innovation, and reducing operational costs. Spotfire has also seen meaningful cost savings in operational expenses.

Introduction

“Our experience with Microsoft has been a true collaboration. The team is always looking to the future and working to anticipate what might be helpful to us. It’s an important relationship that’s keeping Spotfire ahead of the competition and setting a new standard for our industry.”

— Michael O’Connell, Chief Analytics Officer, Spotfire

Enterprises struggle to rapidly access and interpret complex data, leading to delayed decisions and lost opportunities. Skilled users face steep learning curves, while less-technical users are often excluded entirely. Without the ability to quickly retrieve and analyze data to chart a strategic course, organizations risk falling behind the competition.

Spotfire has long been a name synonymous with innovation in visual data science. Combining visualizations and advanced analytics, Spotfire consistently pushes the boundaries of what’s possible, helping organizations make sense of their data and gain actionable insights. To empower its users to stay agile and make better decisions faster, Spotfire has added layers of natural language capabilities to the rich features of its core platform. The combination enables Spotfire users, both novice and seasoned, to access advanced visual data science features through natural language prompts.

“Our customers are solving some incredible problems,” says Michael O’Connell, Chief Analytics Officer at Spotfire. “These large enterprises are inventing new therapeutics that save lives, manufacturing chips with resolution more than 30,000 times smaller than a human hair, and supplying energy to the world. At Spotfire, we are driven to help our customers rapidly identify insights in their data and take actions that generate extreme value for their business.”

Empowering rapid insights

Spotfire’s search for the right technology led to Microsoft Azure AI Foundry. The company selected Azure OpenAI Service within Azure AI Foundry to quickly implement an intuitive, conversational analytics platform extension. Employing the multimodal capabilities in Azure OpenAI Service, the Spotfire Copilot™ assistant helps users interact with data using natural language inside the Spotfire user experience, which drastically simplifies complex analytics tasks. Within days of close collaboration with Microsoft AI experts, Spotfire built a functional retrieval-augmented generation (RAG) prototype, transforming theoretical ideas into tangible innovation.

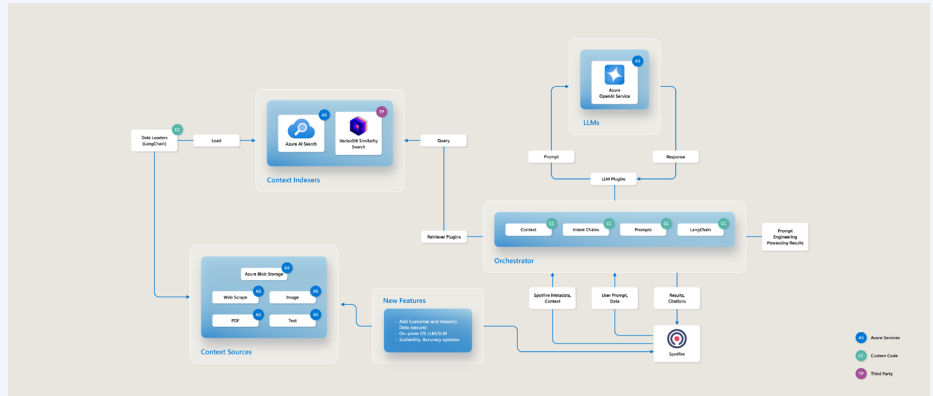
Making it faster and easier to analyze data through interactive AI, Spotfire Copilot was designed to help users quickly navigate the complexities of data analytics. Using Azure OpenAI Service, Spotfire Copilot provides fast insights, automates routine tasks, and enhances the overall user experience.

“Our goal has always been to empower our users with everything they need to make data-informed decisions, making our data visualization solution even easier to work with,” says Ahmad Fattahi, Senior Director of Data Science at Spotfire. “We want our product to be so intuitive that regardless of skill level, users can engage with Spotfire Copilot using natural language and focus on achieving their goals.”

With Spotfire Copilot, tasks previously taking days or weeks can now be completed within minutes. By automating routine data analysis tasks, users spend more time interpreting insights and driving strategic decisions, significantly increasing productivity and innovation across industries.

Figure 1. Spotfire Copilot architectural diagram

The following diagram shows the architecture of Spotfire Copilot, illustrating the products and solutions involved in creating the workflow for the new solution. These include content indexers, such as Azure AI Search, and language models, where Azure OpenAI Service plays a critical role.



Simplifying complex analytics

Azure AI Foundry provides a centralized platform for managing AI resources. In implementing Azure OpenAI Service, Spotfire now offers its visual data science workflow capabilities via a convenient chat interface. This enables AI-assisted interactive visualizations, data science functions, data insights, explanations, and user assistance that use the rich set of Spotfire functionalities. The company can now better help customers discover meaningful connections between variables, surfacing visual insights from data and suggesting high-value business actions.

In addition, Azure AI Search was crucial for RAG use cases. It provides robust repositories and data services, so the AI model can access and retrieve specific information from large datasets.

50%

MORE VALUE FOR
EXPERT USERS

Immediate business impact

"With Azure OpenAI Service, we're seeing a significant reduction in the time it takes to analyze data," says Vaibhav Gedigeri, Lead Data Scientist at Spotfire. "Our users can now spend more time interpreting the results and less time looking for and working with the numbers."

Key solution benefits include the following:

- **Instant data exploration and visualizations with AI:** Azure OpenAI Service gives Spotfire Copilot users the ability to instantly query complex datasets using natural language, making data retrieval intuitive for all users. As a result, the learning curve for new users is reduced and existing user personas are more efficient, reducing analysis time from days to minutes and enabling the creation of visualizations with the click of a button.
- **Enterprise-ready AI at scale:** With Azure AI Foundry and AI Search, Spotfire Copilot can support thousands of users across global enterprises, ensuring seamless scaling while maintaining compliance with strict industry security standards.
- **Faster, smarter data discovery:** Spotfire Copilot uses AI Search to surface the most relevant insights from vast datasets, helping users quickly identify trends and patterns without manual searching.

Figure 2. Spotfire Copilot interface

The following screenshot shows Spotfire Copilot in action, illustrating clear visual insights and natural language summaries. A chat panel on the right shows a prompt: Create a stacked bar chart of losses due to various factors over time. Graphs to the left show the outcome.



Yet another benefit from Azure OpenAI Service is its more secure and private data handling capabilities. Using the enterprise-grade security features in Azure, Spotfire can confidently address stringent regulatory demands from highly regulated sectors such as pharmaceuticals, manufacturing, finance, and insurance. Customers can manage their own Azure-protected environments, benefiting from Azure data privacy and protection capabilities without compromising on analytical capabilities.

"Security is paramount for our large enterprise customers, and our collaboration with Microsoft allays any concerns," says Fattahi. "With Azure AI Foundry, we have the desired observability and control over our infrastructure and can deliver a highly secure environment to our customers."

The company's ability to make Spotfire Copilot available to its global user base in just a few months speaks to the platform's scalability, ensuring that the Spotfire platform can expand as needed.

"Once the proof of concept using Azure was done, we went from a small pilot to a full-scale rollout in a matter of months," says O'Connell. "The speed of deployment was incredible."



Microsoft Azure enables digital transformation in the era of an intelligent cloud and an intelligent edge. Its mission is to empower every person and every organization on the planet to achieve more capability, accessibility, and scalability. Its open and flexible cloud computing platform provides customers with greater efficiency.

AI-driven success continues

"The architecture we developed working with Microsoft makes for easy application of new technologies as those emerge, including AI agents. This flexibility is crucial for staying ahead in the industry," says Marcelo Gallardo, Principal Solutions Architect at Spotfire.

Spotfire Copilot is already delivering results, not just in operational efficiency but also in customer satisfaction and retention, including:

- **Improved user efficiency and job satisfaction:** Instead of having to sit in days or weeks of training before using the tool and generating the first bit of value, customers can effectively navigate data in minutes.
- **Increased ability to innovate:** Since users can automate many tasks and secure data insights more quickly, they can focus on the truly innovative part of their job, driving results for their organization.
- **Cost efficiency and operational gains:** Spotfire has seen measurable cost savings in operational expenses due to reduced analysis times and the need for fewer support resources. A new user can generate value with data 90% faster, while an expert user can generate 50% more value. The scalability of Spotfire's Microsoft-powered solution also means it can quickly adapt to growing demand without significant additional costs.

By developing, deploying, and managing Spotfire Copilot with Azure, Spotfire is well positioned to continue growing and improving user satisfaction, helping further transform data analytics.

"Our experience with Microsoft has been a true collaboration. The team is always looking to the future and working to anticipate what might be helpful to us," says O'Connell. "It's an important relationship that's keeping Spotfire ahead of the competition and setting a new standard for our industry."

Ready to get smarter with Spotfire visual data science? Talk to an expert today at spotfire.com/contact-us.



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Spotfire® is a visual data science platform that makes smart people smarter by combining interactive visualizations and advanced analytics to solve complex, industry-specific business problems.

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