Executive summary

Microsoft Azure

How to Use Azure AI to Solve Real-World Problems

A guide for ISVs

How to Use Azure AI to Solve Real-World Problems

Redefine innovation with built-in intelligence

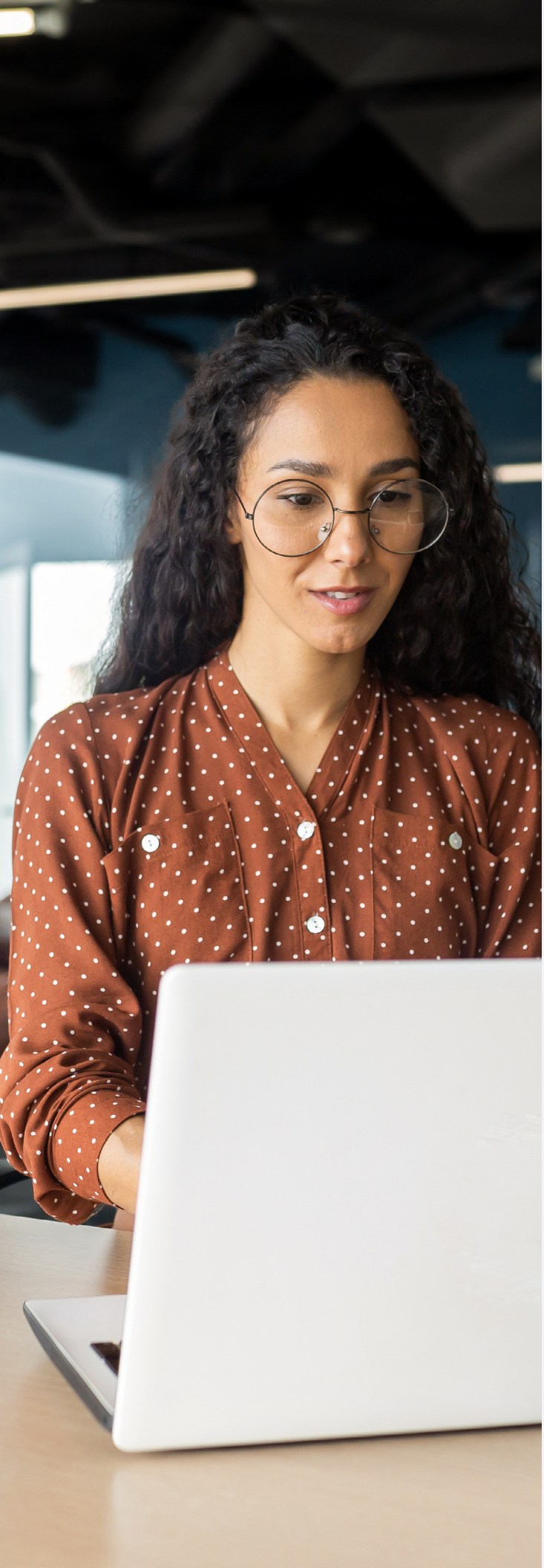
Tapping into the power of AI and machine learning capabilities is imperative for organizations striving to maintain a competitive edge and foster innovation. According to PwC's Global Artificial Intelligence Study,[1] AI could contribute up to $15.7 trillion to the global economy in 2030. Moreover, 87 percent of organizations, according to MIT Sloan and BCG,[2] firmly believe that AI can give them a competitive edge.

These statistics underscore the immense potential of AI. Setting the pace is Microsoft, empowering organizations to seize this opportunity through Azure AI. With Azure AI, organizations can employ this vast potential, resulting in new innovations, enhanced operational efficiency, and a global competitive advantage.

Azure AI comprises a portfolio of AI services: Azure AI services, a comprehensive family of out-of-the box and customizable APIs that enable organizations to fine-tune their AI initiatives; Azure Machine Learning, a platform that empowers data scientists and developers to build, train, and deploy machine learning models at scale; and Azure AI infrastructure, which provides the necessary computational power for AI workloads.

1 PricewaterhouseCoopers, "PwC's Global Artificial Intelligence Study: Sizing the Prize," PwC.

2 Ransbotham, Sam, "Achieving Individual— and Organizational—Value with AI," MIT Sloan Management Review.



Partnering with Azure AI enables natural language interactions, data-driven personalized experiences that improve over time, and the rapid delivery of new features. The true power of Azure AI lies in its ability to offer a unified AI development experience for users to build and run any intelligent solution. ISVs can seize the opportunity in the era of AI to delight customers by infusing cutting-edge models into their applications, enhancing their capabilities and user experience. They can save costs through AI-driven automation and optimization, enabling more time for innovation. Partnering with Microsoft allows ISVs to bring truly intelligent apps to the market and get to the next level of growth.

Deliver better customer experiences

To get a clear picture of the capabilities and benefits of integrating intelligent solutions into applications, take a look at some real-world examples of how ISVs are using AI to bring greater value to their users.

Enhance search capabilities to discover information faster

"Global data and analytics business or technology decision-makers at firms that are interested in or adopting AI are continuing to make serious investments in AI to meet the demands of the business; 83% of them report that their organization plans to increase spending on at least one AI technology over the next twelve months."

—Forrester Artificial Intelligence Market Insights, 2023

Finding the right piece of data amid the ever-expanding data estates has become increasingly overwhelming for organizations. Elastic is aiding its customers who are grappling with data management issues to find and utilize their data effectively while maintaining security.

Elastic specializes in search technology that helps customers, employees, and organizations find what they need faster while ensuring data security and keeping mission-critical applications running smoothly. Because its customers wanted a managed solution that was easy to operate, secure, and scale, the company introduced Elastic Cloud, built on Microsoft Azure. The solution allowed Elastic to handle many basic management services for its customers, such as ensuring best practices for data backups, handling upgrades, and growing or shrinking deployments.

"Our customers would have to do all of these things if they were self-managing the software, but now we can handle them in a cloud offering through Microsoft Azure."

—Steve Kearns: Vice President of Product Management, Elastic

The emerging world of generative AI promises to unlock a wave of possibilities for Elastic users. Incorporating Microsoft Azure OpenAI Service, Elastic Cloud offers more relevant answers to search queries with the Elasticsearch Relevance Engine™ (ESRE). ESRE enables text, vector, and hybrid search—and includes a vector database, semantic search with Elastic's sparse encoder model, and support for multiple natural language processing models. Instead of returning a list of links to internal documents, Azure OpenAI Service processes all available information to create a focused response.

One example is Relativity, a legal search software company that is a Microsoft and Elastic customer. "When legal professionals do a search, they don't want a general answer—they want to find the relevant documents that are important to a particular case and to summarize what's different about them in relation to other cases," says Kearns. "ESRE and OpenAI can deliver those accurate, nuanced responses."

"With Elastic's ESRE, we see the potential of providing a search experience that goes beyond just the keyword searching. It provides an opportunity to create an experience that's augmented with numerous AI capabilities such as GPT-4, signals, classifications, and our own in-house AI solutions."

—Brittany Roush, Product Manager at Relativity

The demand for Elastic Cloud has grown at twice the rate of the company's on-premises solutions, while customers reap improved efficiency and better search results, by adding vector search tools that take advantage of Azure OpenAI Service.

Read the full customer story

Facilitate business administration with groundbreaking AI-charged avatars

Along with helping businesses make data-driven decisions, AI can automate repetitive tasks and streamline business processes. AI solutions can reduce stress on resources, freeing up time to help with more complex or on-demand strategic and creative tasks.

The demand for more efficient and impartial hiring processes, coupled with remarkable strides in natural language processing technology, has propelled the AI recruitment market into unprecedented growth. At the heart of this transformation is DeepBrain AI, actively turning this vision into reality.

DeepBrain AI supports customers around the globe with its groundbreaking AI solutions across several industries, including finance, commerce, retail, education, and media. Now, with the power of Azure AI solutions and Azure Kubernetes Service (AKS), DeepBrain AI can supercharge its offerings to bring its customers exciting new capabilities.

DeepBrain AI began in 2016 as a chatbot service, hoping to help organizations streamline and optimize operations across several business use cases, such as implementing chatbots in call centers. By 2018, DeepBrain AI developed an early prototype of its AI avatars. By 2019, it enabled voice synthesis capabilities for its solutions, and then continued to make significant advances in its AI avatar capabilities.

"We tested several speech-to-text engines before going with Azure Cognitive Services [Azure AI services], as none of the other options could deliver accuracy as high as Azure Cognitive Services [Azure AI services] did, which really took our offering to the next level."

—Michael Jung: Chief Financial Officer, DeepBrain AI

The current product portfolio includes DeepBrain AI Avatar, a library of photo-realistic and virtual avatars that businesses can use for training videos, news broadcasts, marketing videos, and more. It also includes DeepBrain AI Human, which allows users to interact with a photo-realistic AI avatar that serves multiple roles, including an AI retailer, AI banker, and AI tutor.

DeepBrain AI Studios is a text-to-video solution that enables users to input a video topic and generate a video with a photo-realistic avatar narrator—all within minutes. As another part of this extensive AI portfolio, DeepBrain AI Interview enables organizations to record one-on-one interviews between a job candidate and AI avatar to expedite the initial interview process. All of these solutions use the industry-leading capabilities of Azure OpenAI Service and Azure AI services—giving customers access to AI solutions that will prove to be part of the next wave of innovative offerings. Many recognizable brands have already taken advantage of this AI technology, including Lenovo and SK Telecom.

"Choosing Azure wasn't just about utilizing the best AI services available today. The teams at Azure really made us feel like we were a valued partner."

—Michael Jung: Chief Financial Officer, DeepBrain AI

As this collaboration continues to evolve, DeepBrain AI and Azure are poised to shape the future of AI by driving advancements that will enhance human lives and transform businesses around the world.

Read the full customer story

Empower manufacturers with an always-on "ask the expert" experience

The manufacturing sector collects the largest volume of data of any global industry each year, but only a tiny fraction of data collected in factories is evaluated and used. Sight Machine realized that for a manufacturer to succeed, the data has to be centralized, accessible to every team member, and easy to understand.

Sight Machine developed its Manufacturing Data Platform (MDP) to make manufacturing businesses stronger, more sustainable, and resilient. For example, working with manufacturer IPG, Sight Machine probed to understand and assess the obstacles IPG faced when working with industrial data to solve production's greatest challenges. One challenge included limited adoption, meaning primarily engineers and managers used the data. This led to data being accessed at certain times of the day, like the first shift. This disruption led to engineers coming in earlier to input data from other shifts, limiting the potential impact and scale of data-driven decision making.

With these challenges, Sight Machine and IPG set out to implement MDP to contextualize and house all plant data, and make the data accessible to everyone from users on the shop floor to executives. Sight Machine partnered with Microsoft Azure because of its leading edge, cloud, data, and security offerings and commitment to customer success in digitally transforming the manufacturing sector. By working with Microsoft as a trusted partner, Sight Machine alleviated many of its customer concerns.

Since manufacturing data is often siloed or fragmented or has no context, it cannot be used for analysis. Sight Machine worked quickly to implement its MDP, which creates a common data foundation that contextualizes all plant data through Sight Machine's standardized data schema.

By contextualizing all manufacturing data and making it more accessible across all stakeholders, manufacturers are equipped with more actionable insights to unlock and scale new levels of productivity across the enterprise. To better support manufacturers, Sight Machine used Azure OpenAI Service to harness generative AI (GPT-4), to develop the Sight Machine Factory CoPilot.

"Factory CoPilot is a way to break down some of the barriers that have existed in the past between end users and data accessibility... We have our own open API-based chat client where any person can go into this chat client, type a question using a normal sort of English phrasing of a problem, and it will give them back a reply in a once again human-readable format. And so, this really breaks down the barriers to being able to use and work with data in the manufacturing environment."

—Kurt DeMaagd: Co-Founder and Chief AI Officer, Sight Machine

Built on Sight Machine's Manufacturing Data Platform, Factory CoPilot is a natural language interface that provides an always-on, intuitive experience to assist with solving manufacturing's greatest challenges—such as minimizing downtime and improving quality. This chat interface makes it easier for non-data-experts to interact with the tools and understand the results.

Behind the scenes, Sight Machine's machine learning tools seamlessly and rapidly perform all the calculations that its platform has been optimized for. This ensures that the results are based on auditable, traceable, validated statistical models. It also ensures that customer data remains securely in a managed environment and does not leak to the internet.

Read the full customer story

Enable broadcasters to transform real-time data into dynamic live-action graphics

In today's rapidly evolving business landscape, organizations are harnessing the power of AI to uncover innovative use cases for their existing applications. This transformative technology is not only enhancing efficiency but also opening doors to never-thought-before possibilities.

As one of the world's largest sports leagues, LALIGA is a familiar name to soccer enthusiasts. In support of its over 2.8 billion soccer fans worldwide and more than 200 million followers on social media, LALIGA sets strategic goals to continually evolve its digital ecosystem, creating an infrastructure to support the organization's growth.

More than a decade ago, LALIGA employed Mediacoach, an advanced match data visualization platform. Sportian integrated Mediacoach with the Azure platform, and together with Microsoft launched Beyond Stats, an advanced football statistics initiative involving a fan-facing web portal.

"Thanks to the possibilities offered by Microsoft Azure, we can deliver fans a complex set of metrics that were previously only available to those directly involved in the industry. Now, fans can evolve from being passive spectators to active participants in the game."

—Miguel Angel Leal: Chief Technology & Innovation Officer, LALIGA

Match data collected by LALIGA through the 19 Mediacoach cameras installed in each stadium is processed by Azure and analyzed with the help of Microsoft Azure Machine Learning and AI processing capabilities. The Mediacoach solution is further supported by Azure Databricks (for processing advanced sports metrics) and Power BI (for the visual analysis of information). The combined technology collects physical and tactical data points at an unprecedented, near real-time rate. Some of the stats are uploaded post-match to the Beyond Stats portal for fans to consume via any device. As a result, Beyond Stats can reveal new perspectives of the game for fans play by play.

Together, Sportian, LALIGA, and Microsoft have now created 50 new metrics. One of the most important of these metrics is the development of an advanced model of goal probability, expressed on a 0 to 100 percent scale. With the calculation of goal probability derived within 30 seconds, it is now possible for match broadcasters to incorporate the goal probability as a graphic into the live action almost immediately.

With a foundation built on Microsoft Azure, LALIGA takes advantage of innovative technology to transform data, offering a thrilling, personalized perspective to fans, transforming the way the sport is experienced.

Read the full customer story

Transform financial and professional services with AI-powered solutions

Financial and professional services firms represent a $3 trillion market. These firms are regulated by local statutes, client and investor obligations, and ethical codes of conduct. General software solutions don't adequately address the needs of these firms. With their complex relationships, partner-led operations, and compliance and regulatory mandates, they require purpose-built cloud solutions.

This is where Intapp, a key global Microsoft partner, and its unique software as a service (SaaS) offering steps in. Azure underpins all Intapp's solutions and AI initiatives, including one of its most popular solutions, DealCloud. Intapp's DealCloud solution is built for demanding professionals to deliver end-to-end deal execution. It has been an Azure-based solution from the very beginning, but now it too is undergoing transformative change in light of generative AI advancements.

Azure OpenAI Service, Microsoft 365 Copilot, Azure Databricks, and Azure AI services all bolster AI capabilities in Intapp's offerings.

"We have to think about AI differently. Our clients do not have the time or the appetite to source and assemble AI technologies themselves. These knowledge-based industries have unique needs and need 'out of the box' AI capabilities which deliver specific use cases. This is where the combined industry focus of our Intapp solutions and the foundational power of Microsoft Azure and Azure OpenAI Service really derives unique capabilities for financial and professional services firms. "

—Lavinia Calvert: Vice President and Legal Industry Principal, Intapp

Intapp's Applied AI strategy has five major themes for generative AI capabilities for financial and professional services firms: zero-entry capture, conversational query, summarize, recommend, and generate. For example, Applied AI is being deployed to minimize the need to enter data into the system, bolstering a zero-entry philosophy.

Intapp is also using Azure OpenAI Service to automate deal marketing and prospecting workflows. This enables deal teams to use AI-powered opportunity intelligence to curate target buyers and investors and then generate personalized, contextual email drafts using GPT. Additionally, Intapp's relationship intelligence AI capability helps dealmakers harness their networks to find the right contacts to win more deals. The solution analyzes the history of interactions between individuals and automatically helps professionals identify their best and most important relationships.

Intapp has made all its technology available via the Microsoft commercial marketplace to help its clients transact with them in new ways, which works to their advantage, such as their ability to decrement their own Azure consumption commitment through buying Intapp technology. Together, Microsoft and Intapp will continue to work to maximize the benefits of the commercial marketplace for our shared customers.

Read the full customer story

Lead transformation with built-in intelligence

Azure AI offers ISVs a powerful toolset to drive innovation, improve operational efficiency, and gain a competitive edge in the digital era. With Azure AI services, Azure OpenAI Service, and Azure Machine Learning, organizations can lead the way by creating transformative solutions that redefine them within their niche. Organizations can craft their machine learning models bolstered by a robust AI supercomputing infrastructure and open-source frameworks—all steadfastly aligned with the unwavering commitment to responsible AI practices by Microsoft.

Next steps

- Discover AI services for your business with an Azure **free account**.
- Get help for your project. Talk to an **Azure AI specialist**.
- Learn more about **Azure for ISVs**.
- Get skilled up and ready to power AI transformation with this collection of resources on **Microsoft Learn**.
- Get access to free tools, consulting, and resources to help incorporate AI into your solution with **ISV Success**.
- Go to market faster with curated, step-by-step guidance from **app advisor on ISV Hub**.