Microsoft

Microsoft Learn

Accelerate AI transformation with skill building

Why organizations should invest in AI skill building with Microsoft

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SUMMARY

AI transformation starts with skill building, and effective AI skill building starts with Microsoft Learn.

Today, businesses are at a significant inflection point as artificial intelligence (AI) adoption is skyrocketing, empowering teams everywhere to achieve more. A recent IDC study commissioned by Microsoft found that 71% of companies already use AI, while 22% plan to do so within the next 12 months. Yet, despite this momentum, 52% of companies report that a shortage of skilled talent is the biggest barrier to implementing AI at scale.[1] Business leaders looking to prepare their organizations for AI transformation need a cohesive, strategic AI adoption plan grounded in a company-wide skill-building initiative.

AI's ubiquity across business functions means that companies need to approach AI skill building differently from traditional technical learning programs. Organizations need to consider how to upskill their entire workforce—from leadership to IT to line of business users—to maximize their investment in AI.

For organizations ready to start, Microsoft Learn has resources that span the AI adoption journey, including role-specific and scenario-specific training that addresses functional and project needs. Skill building with Microsoft means learning the foundations of AI to help business leaders craft strategic AI plans, giving technical teams the knowledge to prepare for, implement, and build AI applications with Microsoft's AI solutions, and empowering business users with AI skills to supercharge their productivity and performance.

A new era of AI has arrived. Start your business's AI transformation today with Microsoft Learn, the trusted source to help your team get skilled up and ready to power AI transformation with the Microsoft Cloud.

HIGHLIGHTS

As AI transforms the way work is done, many businesses are struggling to implement AI solutions due to a skills gap. A lot of these organizations lack a structured approach to AI learning, partition AI to small teams, and are waiting to engage.

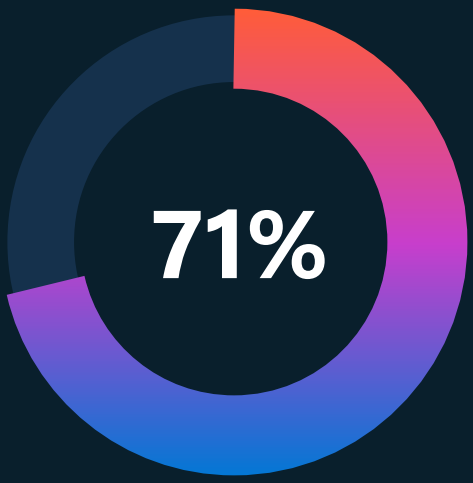
To accelerate AI transformation, organizations need to take a skills-first approach.

- **Take a structured approach to AI skill building**: Build skills based on individual and team goals: Understanding AI, Preparing for AI, Using AI, and Building AI solutions.
- **Upskill across every business function**—from leadership to IT to dev to line of business users.
- **Start with a trusted partner.** Microsoft is here to help you on your AI learning journey. Train your employees on AI foundations, skills, and Microsoft AI solutions with Microsoft Learn at learn.microsoft.com/ai.

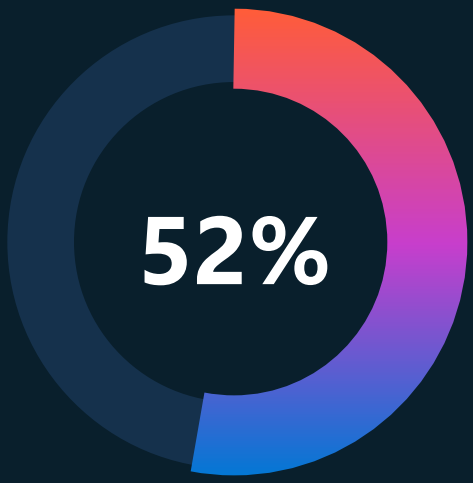
Discover how Microsoft Learn can help accelerate your AI journey

› learn.microsoft.com/AI

Does your business have the skills to transform with AI?



of companies are already using AI.[1]



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ACCELERATE AI TRANSFORMATION WITH A SKILLS-FIRST APPROACH

Take a structured approach to AI skill building.

Upskill across every business function.

Start with a trusted partner.

AI is transforming the business landscape

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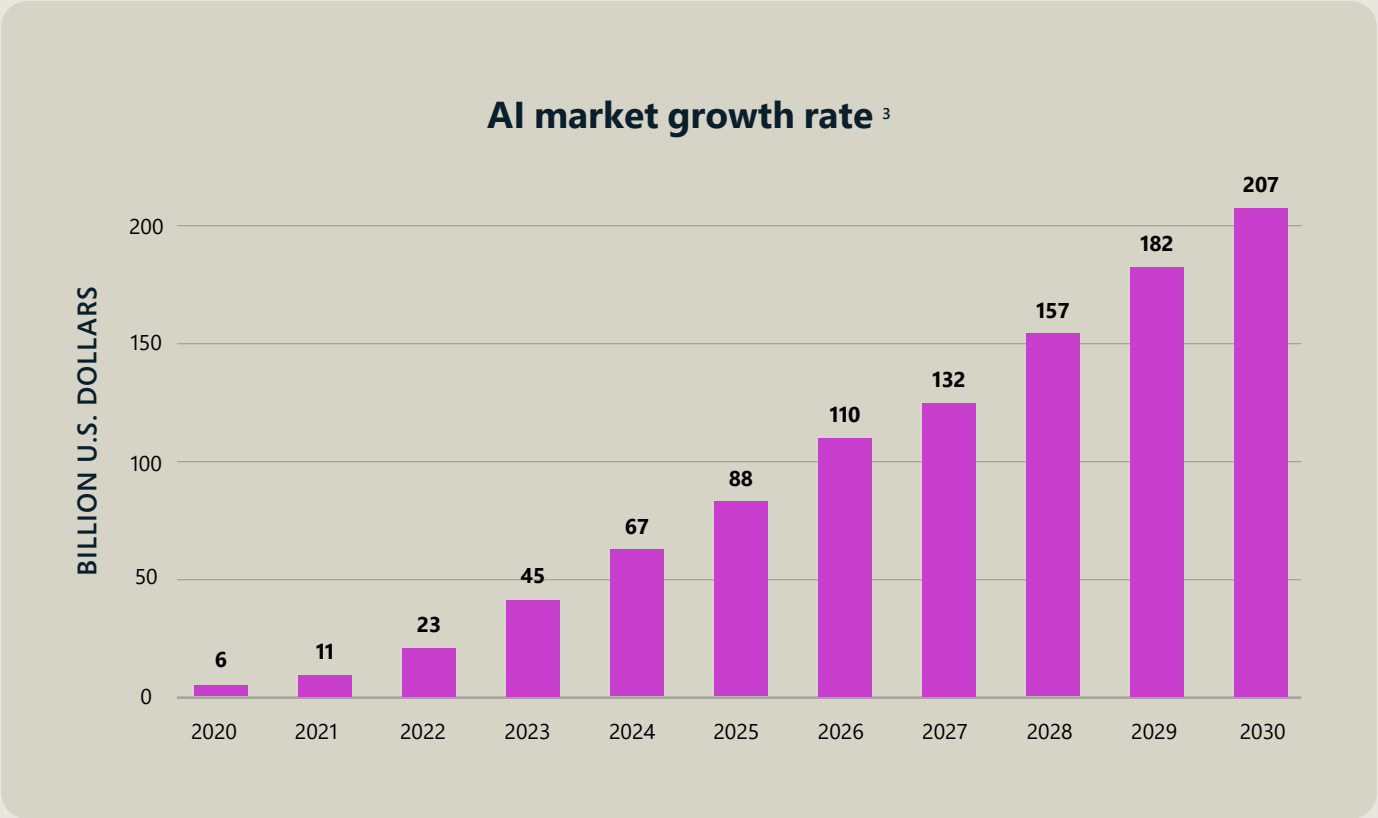
While artificial intelligence (AI) computing dates back to the early 1950s, recent advancements have rapidly accelerated the development and adoption of this transformational technology. In 2015, only 0.71% of Russell 3000 companies mentioned AI on earnings calls; by 2023, that number was 16.63%.[2] And with the recent release of new generative AI solutions—such as ChatGPT and Microsoft Copilot—interest in AI is only accelerating.

In 2023, the total market size for AI reached $241.80 billion and is projected to reach $738.76 billion by 2030. Generative AI alone reached a market size of $44.89 billion in 2023, up 90% from the year prior ($23.17 billion) and a whopping 692% from 2020 ($5.67 billion). By 2030, the generative AI market is expected to reach $206.95 billion at an annual growth rate of 15.83%.[3]

Part of this momentum is driven by the fact that generative AI is fundamentally shifting how we interact with computers. AI previously lived in a black box, embedded deep in software solutions that couldn't be touched. By contrast, today's generative AI experiences enable anybody to interact with—and benefit from—artificial intelligence.

> **Today's generative AI experiences enable anybody to interact with—and benefit from—artificial intelligence.**

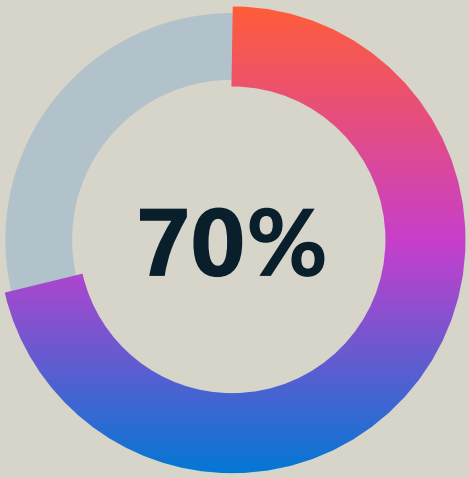
As a result, generative AI is positioned to be ubiquitous across every industry and business function, reshaping business cultures and how work gets done. Technical teams are using state-of-the-art AI platforms to train new models and build AI-enabled tools, while copilot



experiences are helping teams work smarter, boost productivity and creativity, and stay connected. Leveraging the power of AI, sellers can review sales data and predict when a customer is ready to buy, legal teams can audit contracts to ensure compliance with new regulations, supply chain leaders can analyze ERP data to find inefficiencies and optimize processes, and so much more.

According to a recent Microsoft study, organizations that adopted generative AI tools experienced an 18% increase in customer satisfaction, employee productivity, and market share, while 70% of Copilot users said they were more productive, and 68% said it improved the quality of their work.[4]

As the AI market booms, business leaders are working to position their companies to capitalize on the opportunities AI presents. According to a recent IDC study commissioned by Microsoft, 71% of companies are already using AI, and 22% are planning to do so within the next 12 months.[1] However, despite this high interest, AI adoption does not come without its challenges.



of Copilot users said they were more productive.[4]

Explore Microsoft's apps and services

› microsoft.com/AI

A skills-first approach to AI adoption

A skills-first approach to AI adoption

AI accelerates the skills gap

For years, organizations have been battling a growing skills gap that has had material costs to many businesses. Across IT, for example, companies report that a lack of skills had significant costs to their business, delaying the development of new products and services (44.6%), slowing the creation of new hardware and software (43.6%), and causing challenges meeting quality objectives (43.5%). Additionally, it hurt customer satisfaction (40.5%) and led to lost revenue (37.5%).[5]

While many IT departments have suffered from talent shortages, the problem is not partitioned to technical skills; almost all departments face talent shortages and skill gaps within their teams. Eighty-seven percent of companies worldwide reported experiencing skill gaps or said they expect to within the next five years.[6] And this problem is only expected to accelerate as AI changes the way work is done.

Despite interest in AI soaring, many businesses feel they lack the strategic knowledge, technical skills, and solution proficiency to effectively implement AI. Fifty-two percent of companies report that a shortage of skilled talent is the biggest barrier to implementing AI

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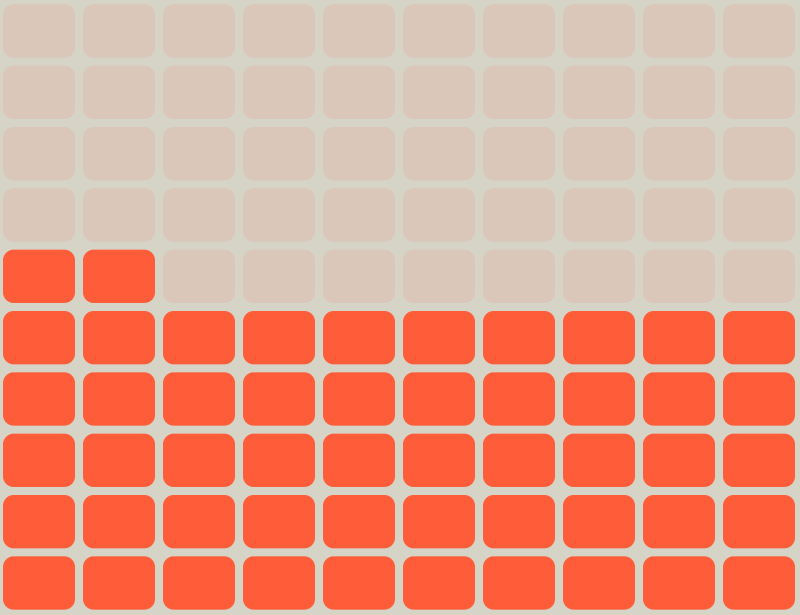
at scale,[1] the top cited challenge, while 82% of leaders say their employees will need new skills to be prepared for the growth of AI.[7] Fifty-eight percent of companies reported they were already creating plans to upskill and reskill their workforce to help overcome the AI skills gap,[8] with many more companies likely to follow.



52%

of companies report that a shortage of skilled talent is the biggest barrier to implementing at scale.[1]

Companies face challenges in preparing their teams for AI

For many businesses, bridging the technology skills gap may not be as simple as it sounds; 84% of companies listed training existing talent on new technology as a major technological and labor challenge, with 28% saying it is a significant challenge.[9] Based on Microsoft's internal research with customers and partners, the same trends appear to hold true for AI skill building,[10] which exposes several key challenges businesses are facing with AI training today.

Lacking a structured approach

To start, many organizations currently lack a structured approach to AI skill building. As a result, they may find it difficult to train teams on AI foundations or how to properly implement and build. These companies often find themselves at an impasse, lacking the knowledge to effectively establish use cases with ROI projections required for broader adoption and adequately address technical requirements, such as those surrounding data security.

Not upskilling across every business function

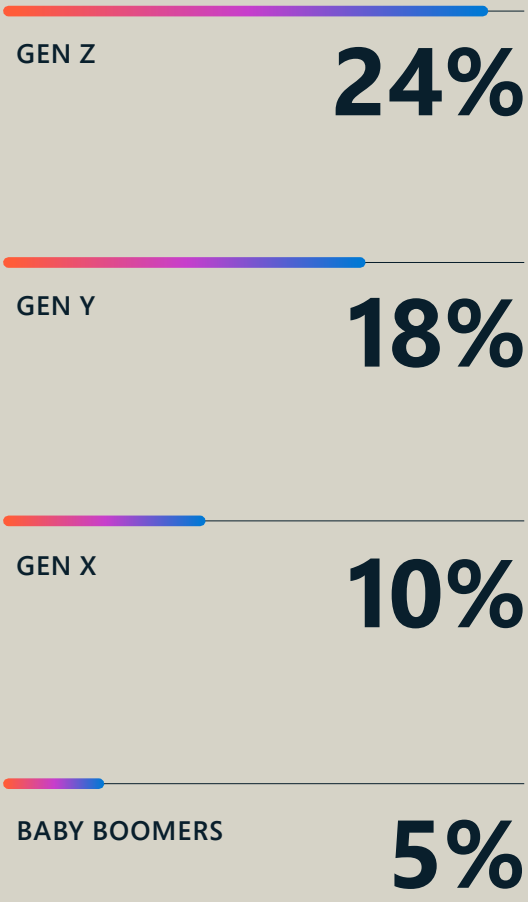
The second finding from our research was that many organizations partitioned AI to small teams. As a result, they were training IT teams but not those building solutions or business users. Alternatively, some were training business users without training IT on how to properly prepare systems and implement. Because AI cuts across nearly every team—impacting company culture and how work gets done—these businesses are quickly finding that small-group skilling is an ineffective approach to building broader adoption.

Waiting to engage

Lastly, our research showed that many organizations are waiting to engage in skilling curricula until they have defined approved AI usage. This approach to AI skill building has two limitations. The first is that a lack of AI skill building limits progress in developing an AI strategy, which, in turn, promotes a lack of AI skill building. This circular problem results in businesses becoming stuck in this cycle, unable to move forward on their adoption journey.

The other challenge companies may face with the wait-and-see approach is that employees aren't waiting. In a recent GWI survey, 44% of respondents said they use AI at least weekly at work, with nearly a quarter (23.7%) saying they use AI at least daily. These numbers are even higher for Gen Z employees, nearly two-thirds (60.6%) of whom said they use AI at work at least weekly, while a third (32.4%) reported using it at least once a day. At the same time, nearly half (46.5%) reported not feeling comfortable disclosing their use of AI to their boss.[11] As a result, the lack of a structured AI learning program is likely to result in less responsible use of AI.

Daily AI usage at work [11]

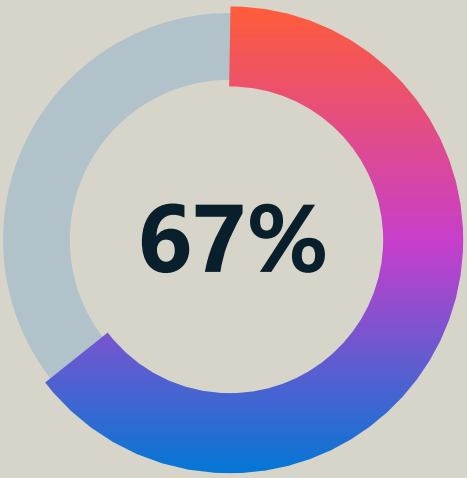


AI adoption requires a skills-first approach

To ensure that business leaders have the knowledge to develop cohesive AI strategies, technical teams have the skills to train and deploy new solutions, and line of business users have the skills to utilize these new tools, companies must take a *skills-first approach* to AI.

The shift to a skills-first approach—which emphasizes a person's skills and competencies in addition to degrees, job histories, and job titles—is a growing trend as businesses seek more effective ways to address the challenges of attracting, hiring, developing, and redeploying talent. To address the skills gap, 43% of companies said they are looking to build internal capabilities through skill-building initiatives, while 24% of companies said they would primarily focus on hiring generalists and focusing on adaptability, further demonstrating the need to upskill talent.[12]

Further supporting a skills-first approach is an employee demand to learn new skills. Sixty-one percent of employees report that learning new skills is important to them.[13] Two-thirds of respondents who have access to AI tools in the workplace said they are interested in receiving training on AI tools to support their work, with nearly a quarter reporting they're very interested.[14] This high value placed on learning is part of the reason that providing learning opportunities is the top cited way organizations are working to improve retention.[15]



of respondents who have access to AI tools in the workplace said they are interested in receiving training on AI tools to support their work.[14]

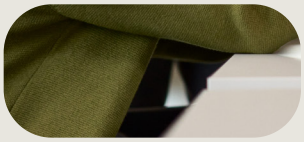
Shifting to a culture of AI transformation requires shifting to a culture of learning with a skills-first approach.

Shifting to a culture of AI transformation requires shifting to a culture of learning with a skills-first approach. Businesses looking to lead with learning must invest in developing a structured approach to AI learning, upskilling across every business function, and starting today with a trusted partner.

Develop a structured approach

The AI learning journey

Microsoft Learn has developed a four-stage approach that companies can follow to upskill their workforce on AI. As businesses and individuals may be at different places in their AI journey, these stages are not intended to be linear, nor are they predefined paths or mandatory steps. These stages have been designed as a framework for organizations to discover the training resources needed to upskill their teams. Across each stage, we have curated role-based training resources—ranging from fundamentals to technical knowledge to business-user training—that teams can leverage to develop their AI skills.



THE FOUR-STAGE AI LEARNING JOURNEY

Understanding AI
Start with a strong foundation. Learn AI concepts, definitions, and key terms.

Preparing for AI
Gain essential knowledge to get your infrastructure ready to adopt copilots.

Using AI
Discover skills to use copilots and maximize their benefits.

Building AI solutions
Learn how to build AI experiences into your own apps and services.

Understanding AI

Powering your AI transformation with the Microsoft Cloud starts with building a strong foundation of AI knowledge. Developing a basic understanding of AI concepts, such as simple definitions and key terms, empowers team members across the organization and provides a common knowledge framework when developing and deploying AI solutions. When everyone across the organization is aligned on what AI is, how it works, and what services and technologies it includes, your organization will be empowered to take full advantage of it and drive greater business success.

Following our commitment to leading our industry in the development of secure and responsible AI, skilling content in this stage of your learning journey will also help you understand and gain skills in responsible AI, including the principles and best practices that ensure that AI work is accountable, inclusive, reliable, safe, fair, transparent, secure, and respects privacy.

Preparing for AI

Organizations need certain skills now to establish the infrastructure required to enable and use AI solutions successfully. Accordingly, the *preparing for AI* stage entails acquiring the knowledge to successfully prepare organizations to onboard copilot experiences and build AI apps.

For example, companies deploying Copilot for Microsoft 365 need to know how to properly manage their Microsoft 365 tenant and prepare their data for Copilot searches—including protecting sensitive data. Similarly, deploying Copilot for Security requires teams know how to review and refine security operations—including knowledge of Microsoft Defender and Microsoft Sentinel—to monitor, identify, investigate, and respond to threats. Those considering training their own machine learning models will need skills to build end-to-end analytics solutions focused on data engineering and data science, as well as deep knowledge of Microsoft Fabric and Microsoft Power BI.

Using AI

AI is poised to impact every discipline within the organization. We've built AI capabilities into the Microsoft Cloud solutions customers are already using today, helping everyone be more productive, more creative, more efficient, and more innovative with Microsoft Copilot across every Microsoft Cloud experience. To maximize the effective use of Copilot and other AI solutions, end users must understand how to use them and gain the skills to write good prompts.

Furthermore, as AI changes the way work is done, it has the potential to create a culture shift, particularly for business users. Ensuring teams have the knowledge and skills to utilize AI effectively will help provide alignment as organizations move towards a culture of AI transformation.

Building AI solutions

Part of what makes Microsoft AI's apps and services so powerful is that they give businesses the flexibility and tools to build transformational experiences into their own apps and services. We're making it easy for any organization to build and extend AI capabilities into new and existing apps and copilot solutions using the same open ecosystem stack and AI services Microsoft used to create our own Copilot.

Unlocking this power requires giving team members the skills to design and build custom solutions to solve unique business problems, whether they're data scientists gaining the skills to create and train machine learning models with Azure Machine Learning, developers and AI engineers learning how to build custom copilot experiences and AI-powered apps with Azure AI Services and Azure Open AI, or citizen developers gaining the skills to create intelligent chatbots with Microsoft Copilot Studio.

The opportunities to leverage AI remain limited by only two things: your imagination and the skills to build your vision.

The opportunities to leverage AI remain limited by only two things: your imagination and the skills to build your vision. By successfully training your teams to build AI solutions, you can unlock the collective power of your organization to develop new and creative solutions that will drive productivity and growth.

Upskill across every business function

A functional approach to AI learning

The ubiquity of AI across the organization requires that businesses rethink their skill-building approaches. From leadership to IT to dev to line of business users, everyone in an organization plays an essential role in company-wide AI adoption. Simply upskilling IT is no longer enough; to help develop, deploy, and make use of new AI solutions, companies must upskill their entire workforce in AI. All teams must obtain foundational AI knowledge, and every department must build the necessary skills to enable AI transformation.

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Enable AI strategy across leadership teams
Any successful AI implementation requires a sound strategy, and every sound AI strategy is rooted in deep foundational knowledge. According to Microsoft's internal research, business leaders driving successful AI strategies and adoption in their organizations need to develop a strong understanding of AI concepts, definitions, and key terms.[10]

In addition to learning foundational AI concepts, technical leaders who are leading AI strategy with a focus on technology adoption require deeper knowledge of how to prepare IT infrastructure. A basic understanding of how to prepare infrastructure and how copilot experiences work will also help leaders understand what is possible with AI so they can better develop their short-term strategy and longer-term AI visions.

AI SKILLS BY ROLE

Business leader
Leads AI strategy and adoption in an organization.

Technical leader
Leads AI strategy and adoption with a focus on technology adoption.

Business user/Functional consultant
Uses AI technologies, like copilots, or helps implement AI technologies.

Developer/AI engineer/Software architect
Builds AI solutions and apps.

Citizen developer
Builds low-code AI apps.

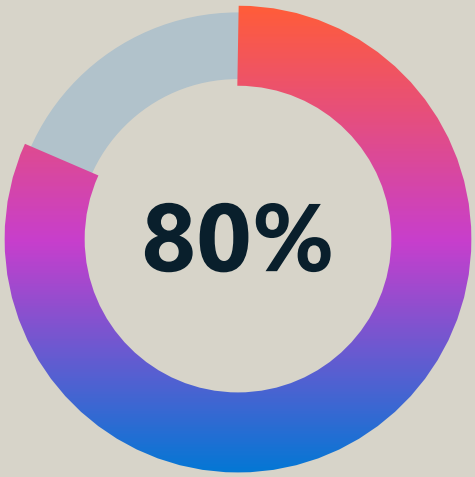
Data scientist/ML engineer
Implements data science and machine learning solutions.

Data engineer/Data analyst
Implements end-to-end analytics and data engineering to prepare for AI solutions.

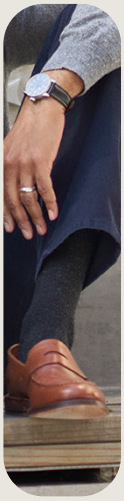
IT professional
Takes care of infrastructure needed to implement, deploy, secure, and manage AI solutions.

Learning AI by role

› aka.ms/LearnAIByRole



of companies expect increased demand for individuals with AI and machine learning knowledge.[12]



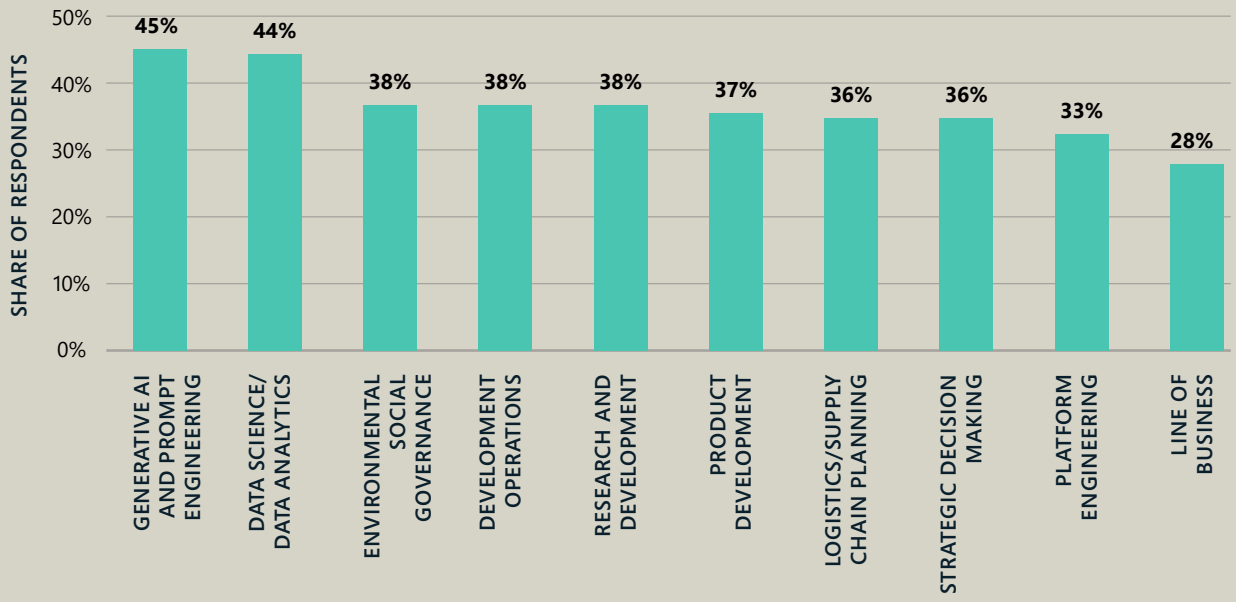
Prepare IT to enable IT systems

For many companies, the most significant demands for AI skill building fall within technical disciplines, as deploying AI solutions not only requires skills that are AI-evident but also skills to prepare organizations for AI, including security, software management, data modernization, and analytics.

Forty-five percent of businesses reported that generative AI and prompt engineering are the areas of business that will require the most AI skills, while data science and analytics (44%) and platform engineering (37%) were other top technical skills that businesses feel will be required.[16] Additionally, 80% of companies expect increased demand for individuals with AI and machine learning knowledge, while demand for skills related to AI software development and AI-integrated IT infrastructure are projected to increase by 59% and 58%, respectively.[12]

IT professionals need to learn how to take care of the infrastructure required to implement, deploy, secure, and manage AI solutions. Data scientists and machine learning engineers need the skills to effectively implement data science and machine learning solutions, while data professionals, including data engineers and data analysts, need the skills to implement end-to-end analytics and data engineering to prepare and manage their AI solutions.

Areas of business requiring AI skills [16]



Train developers to build new solutions

The flexibility of generative AI opens a lot of doors for how it can be used. Many companies are already developing custom AI solutions to help address internal needs, while others are integrating AI into existing and new products to drive growth. Thirty-eight percent of businesses cited development operations as an area that will require AI skills.[16]

Developers and AI engineers will require the skills to help customize and build new AI solutions. Similarly, flexible low-code development platforms can empower low-code developers to create new applications that address targeted needs.

Empower AI utilization and use cases across the organization

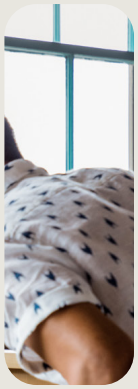
Capitalizing on the many benefits of AI not only requires effective implementation and tools; it requires that those tools are effectively utilized by line of business users. Accordingly, businesses need to train their users on AI fundamentals and how to use these new AI solutions, such as copilots, to maximize their benefits.

Because AI cuts across nearly every team, it is not only impacting how work gets done but is also creating a culture shift for business users. Upskilling all teams is essential to ensure organization-wide adoption and alignment.

Explore Microsoft AI role-based learning recommendations

› aka.ms/LearnAIByRole

"By offering comprehensive curated resources, tools, and guidance, Microsoft Learn supports you and your team as you build the skills necessary to execute new AI innovation projects and achieve your business objectives."



Start today with a trusted partner

AI skill-building with Microsoft

As business leaders begin to explore the market, it is easy to become overwhelmed by the rapidly growing number of companies in the AI market, and responding to the pace of change can be paralyzing. Fortunately, starting your skill-building journey with Microsoft Learn is an easy decision. Microsoft empowers organizations to unlock productivity with Microsoft Copilot, build AI capabilities with an open AI platform and partner ecosystem, and co-innovate with trust with industry-leading responsible and secure AI. Furthermore, Microsoft's AI apps and services integrate with the Microsoft tools your team is already using, accelerating learning curves and time-to-value.

Microsoft Learn provides organizations with learning content for wherever you are in your AI journey. Role- and technology-based training guide your teams through structured learning paths and help them build on existing skills.

Start learning with a trusted partner

Utilize Microsoft's innovative technology and tools
Microsoft is empowering businesses to lead in AI with solutions that inspire productive, meaningful work, increase efficiency and cost savings, and generate new business value. From Copilot, which enhances productivity and creativity, to solutions like Azure OpenAI Service and Azure AI Studio that enable custom AI development, Microsoft offers cutting-edge innovation backed by the stability of a long-standing technology partner.

Get peace of mind with industry-leading responsible and secure AI
As AI transforms the way business is done, organizations must build safety and responsibility into their AI journey from the very beginning on a trusted and secure cloud. Microsoft has built its reputation on security and is committed to the advancement of AI driven by ethical principles.

Leverage a solution that is integrated into the tools your team is already using
To gain the most value from AI solutions, they need to integrate with your existing tools and processes. Microsoft solutions are designed to work with the tools your team already knows and works with. As a result, there is a lower learning curve for teams, who will see faster time to value and higher impact.

> Microsoft empowers organizations to unlock productivity with Microsoft Copilot, build AI capabilities with an open AI platform and partner ecosystem, and co-innovate with trust with industry-leading responsible and secure AI.

Microsoft Learn is your AI skill-building partner

No matter where you are on your AI learning journey, Microsoft Learn meets you there. Whether you're just beginning to understand what AI is and how it might benefit your organization, you're ready to use Copilot and productivity-enhancing AI, or you're looking to build bespoke AI-powered solutions, we can help you reach your goals.

By offering comprehensive curated resources, tools, and guidance, Microsoft Learn supports you and your team as you build the skills necessary to execute new AI innovation projects and achieve your business objectives. Here are some learning tools and resources to explore.

AI learning hub
AI skill building begins with the AI learning hub, the go-to resource for AI learning. In this hub, business leaders, business users, and technology professionals can find everything they need to gain AI skills in a single place. They can explore training by role or by technology, options to learn with the support of the community or Training Services Partners, and recommendations from our team on new topics to deep dive into.

Verifiable AI skills with Microsoft Credentials
Take your team's AI skills to the next level with Microsoft Credentials, which include Microsoft Certifications and Microsoft Applied Skills. Certifications offer the flexibility to grow the skills needed for critical roles, and Applied Skills offer the agility to expand the skills required for key business scenarios. Together, they bring verifiable skill sets aligned to AI job roles and AI projects, ensuring you're building resilient and adaptable teams that are ready to take on new opportunities.

Explore Microsoft Credentials for AI and find role-based certifications like Azure AI Engineer or Azure Data Scientist, or scenario-based Applied Skills, including developing generative AI solutions, training and deploying machine learning models, or creating analytics solutions with Microsoft Fabric.

Explore the Microsoft AI learning hub

› learn.microsoft.com/AI

Explore Microsoft Credentials for AI

› aka.ms/CredentialsforAI

Start your AI learning journey today with Microsoft Learn

As AI transforms business, it is imperative that leaders prepare their organizations with the knowledge and skills to adopt and adapt with AI. By taking a skills-first approach to AI, companies can ensure that their business leaders have the knowledge to design effective AI strategies, their technical teams have the skills to prepare their IT systems and build powerful AI solutions, and business users are equipped to put AI into action.

Wherever you are in your AI learning journey, Microsoft Learn can help your team gain the valuable skills needed to accelerate your AI transformation.

Visit the AI learning hub today to start your AI journey.

Discover how Microsoft Learn can accelerate your AI journey

› learn.microsoft.com/AI

Endnotes

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6. McKinsey & Company, Beyond hiring: How companies are reskilling to address talent gaps, January 2020.

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10. Microsoft, Internal AI Skilling and Adoption Research, January 19, 2024. *The Microsoft AI Skilling and Adoption Research study was conducted via in-person and digital qualitative in-depth interviews (IDIs) with 32 participants, between November 2nd and November 16th, 2023. Respondents met the following sampling and screening criteria: Engaged in skilling with AI, their organization had a mix of adoption across using AI and building AI, and they were employed in a technical role.*

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