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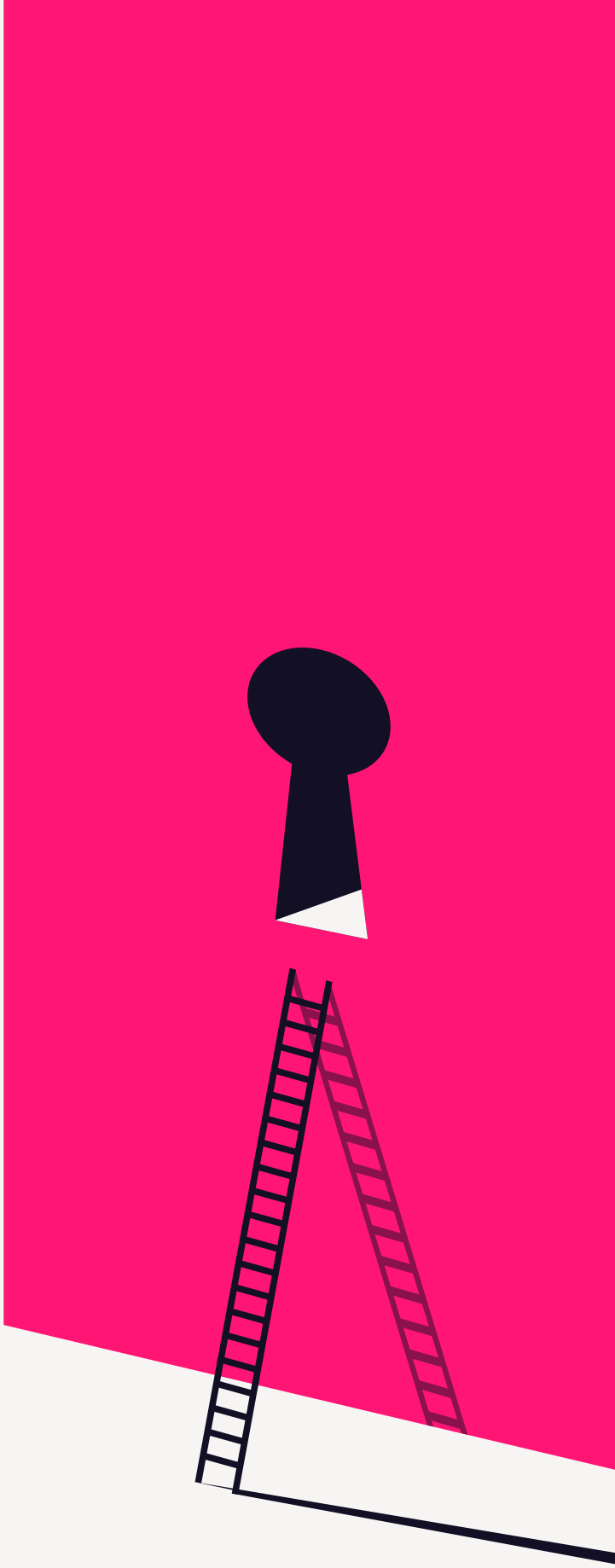
Pluralsight

2025

Tech Skills Report

Unlock the insights
to move forward faster



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Executive summary

Tech is changing—fast. Whether you're a leader looking to drive value from tech investments or a practitioner trying to learn the new AI platform, the struggle to keep up with the latest developments is real.

Skills are key to staying ahead, but which are the most important to build? And how can leaders and professionals use those insights to prepare for what's to come?

To find out, we surveyed 1,500 tech executives, IT professionals, and business professionals across the United States, United Kingdom, and India.

While roughly two-thirds of organizations say their skills gaps have improved since last year, and **95% of executives say building a culture of learning around data and technology is a priority at their organization, the vast majority of IT and business professionals say it's not enough.**

This report uncovers the current tech skills landscape, including top skills, gaps, and challenges, and how to use those insights to prepare for the future of tech.

Main takeaways

95% of executives say building a culture of learning is a priority at their organization, but 95% of IT and business professionals say they need more support to learn tech skills.

Cybersecurity, cloud, and AI/ML are the top three technical skills gaps—and the most important skills to learn in the next year, according to IT practitioners.

Finding time is the top barrier to learning new skills for the fourth year in a row.

Certifications are the number one factor in earning a raise or promotion for tech professionals.

89% of organizations say hiring is more expensive than upskilling for IT roles.

48% of IT professionals and 58% of business professionals have had to abandon projects partway through due to a lack of tech skills.

Amid constant tech changes, upskilling pays off

Last year, our 2024 Technical Skills Report found that 99% of organizations have benefited from upskilling, with many seeing increased productivity, employee retention, and flexibility.

This year, with the explosion of new products, security vulnerabilities, and AI advancements, upskilling continues to pay off for organizations *and* practitioners.

Upskilling is faster and more cost-effective than hiring

If you're struggling to prove the value of L&D in your specific organization, here's the good news: The majority of organizations are seeing upskilling ROI, specifically when it comes to efficiency gains and cost-effectiveness.

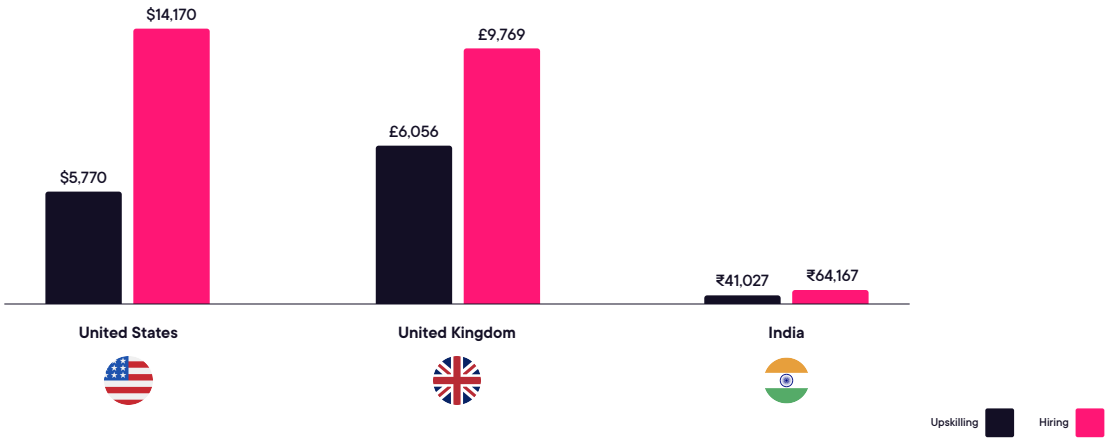
For one thing, upskilling is fast. **43% of organizations say upskilling existing employees is faster than hiring new IT talent,** as opposed to just 27% who say hiring is faster.

As a result, it takes fewer days for tech professionals to get up to speed and start contributing to critical projects.

89% of organizations also say upskilling existing employees is cheaper than hiring for tech or IT roles. In fact, most organizations (73%) spend less than $5,000 on upskilling IT employees, while nearly half (46%) spend more than $5,000 on hiring, and 40% spend over $10K per new employee.

Organizations in India tend to spend more on upskilling than their US and UK counterparts, but 78% of Indian executives still say hiring is more costly than training.

Average cost of upskilling vs. hiring by region



Upskilling impacts outcomes and revenue

Beyond hiring costs, executives have also started digging deeper into ROI for tech skill development. Last year, the most-used metric to track upskilling success was employee engagement. This year, executives' most-used metrics include:

- Use of skill (improved employee productivity, improved team outcomes)
- Financial value (revenue growth, cost savings)
- Proof of skill (skill assessment ratings, employee performance ratings or promotions)

If you're not sure what to track in your organization, these metrics align upskilling with broader organizational outcomes, making them a good place to start.

Upskilling helps practitioners earn promotions and raises

IT practitioners and business professionals personally benefit from upskilling, often seeing increased productivity or new career prospects.

Both IT and business professionals say the biggest indicator that they've acquired a new tech-related skill is when their work improves. That includes things like becoming more efficient in their role and receiving positive feedback.

Upskilling also helps professionals move beyond their current role, even contributing to raises and promotions. **The number one factor in earning promotions or raises for tech professionals? Certifications.** 46% of IT professionals say certifications improved their salary or earned them a promotion in a way they believe wouldn't have happened otherwise.

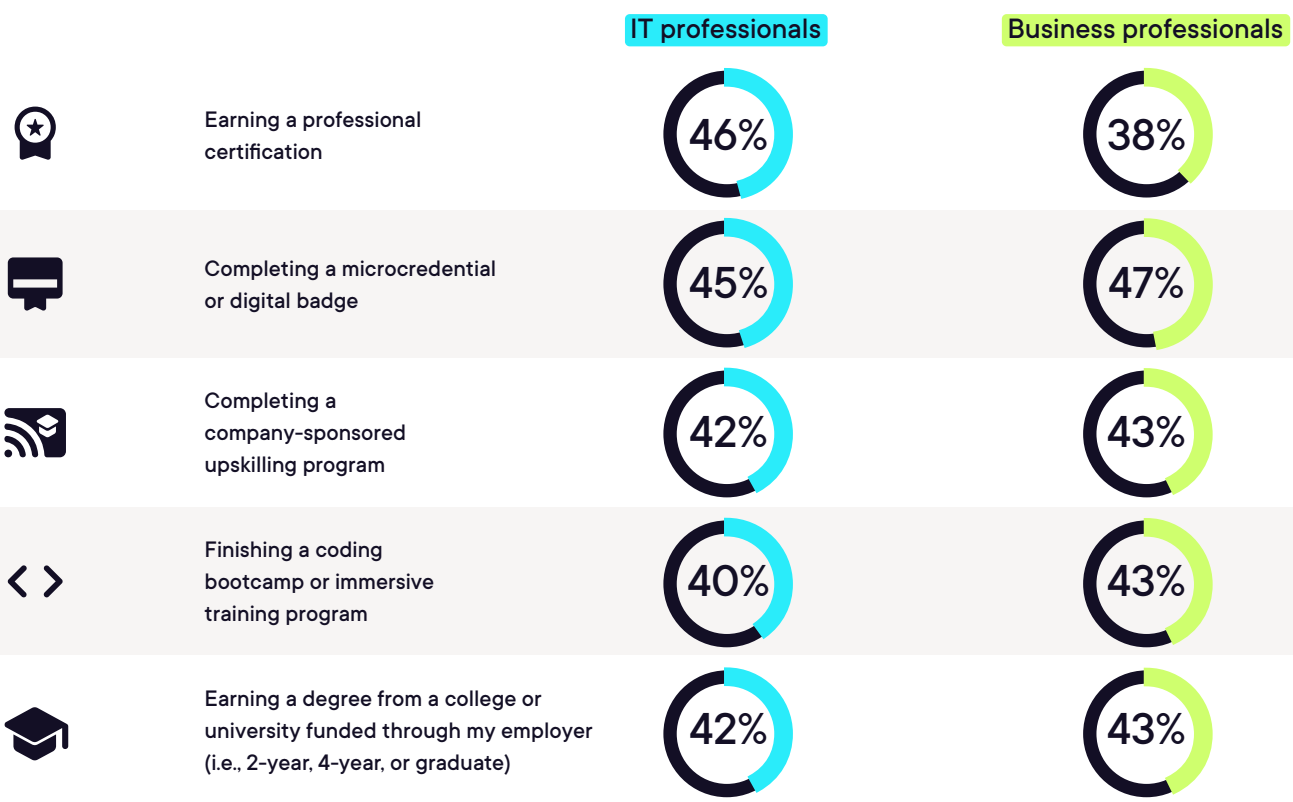
Studying for certifications like the ones offered by AWS, Cisco, and CompTIA provides a double bonus: You build your knowledge and have a greater chance of earning more or advancing your career.

If you're not in a tech-specific role, you might focus on a microcredential or digital badge for tech skills. Business professionals say this is the top consideration for raises and promotions in their roles.

Regardless of whether you consider yourself an IT professional or not, the bottom line is clear: You no longer need to earn a formal degree to pursue, and benefit from, tech skills.

> *"Certifications are significant for career progression, but it really should be more about how you study for your certifications. You should be using them as an opportunity to increase the efficiency of your learning habits and find how you learn best. Treat them as launchpads into creating hands-on projects to truly demonstrate that you not only know the material, you can implement it as well."*
>
> Andru Estes, Principal Cloud Author, Pluralsight

Top factors in earning raises or promotions



Takeaway

Amid tech changes, one thing is certain: Upskilling is valuable for organizations and practitioners. As budgets tighten and headcounts decrease, skill development is one of the most effective ways to prepare teams for the future. It's also a clear way for practitioners to stand out and earn promotions and raises.

Existing learning resources and support fall short for tech skills

The benefits of upskilling are clear for both practitioners and leaders, but organizations aren't doing enough to unlock that potential. And that has real consequences.

95% of executives say building a culture of learning around data and technology is a priority at their organization. However, the vast majority of IT professionals and business professionals (95%) say they need more resources to learn tech skills.

As technology moves full speed ahead, this disconnect will only become more pronounced. Leaders will need to address this challenge if they want to maintain legacy systems and take full advantage of emerging technologies.

> *While nearly all executives acknowledge the strategic importance of a learning culture around technology, the fact that 95% of professionals still feel under-resourced reveals a persistent execution gap between leadership intent and day-to-day enablement. Closing this gap requires leaders to move from aspirational statements about culture to measurable action, embedding continuous learning into performance reviews, workforce planning, and leadership accountability.*

Matt Lloyd Davies, Cybersecurity Researcher and Principal Author, Pluralsight

Finding time to learn is the top barrier to upskilling

67% of organizations say the IT skills gap has gotten better since last year. However, that number is down 11% year over year, potentially due to the rise of AI and its impact on everything from cloud and cybersecurity to software development.

So, what's getting in the way of learning? Everyone agrees on the top challenge: finding time to learn.

Lack of employee engagement and support from leadership round out the top three.

If this sounds familiar, it should. **Lack of time has been the number one barrier for the past four years, and lack of engagement and leader support also made the list last year.**

Top barriers to upskilling

1. Finding time to learn
2. Low employee engagement
3. Lack of leadership support

> *If finding time is the number one learning barrier again and again, the issue isn't calendars—it's culture. A learning organization doesn't make time; it builds time into their business model.*

Drew Firment, AWS Community Hero and VP of Global Partnerships, Pluralsight

Takeaway

Lack of time and support prevent organizations from realizing the full potential of upskilling. These barriers won't go away on their own. Unless organizations commit to giving IT and business professionals the support they need, the skills deficit will only increase.

Skills gaps in security, cloud, and AI/ML impact legacy systems, productivity, and more

The lack of learning time and support is causing some serious skills gaps for tech, nontech, and nontech professionals. Right now, the top technical skills gaps exist in cybersecurity, cloud, and AI/ML.

Top technical skills gaps

1. Cybersecurity
2. Cloud
3. AI/ML

Compared to last year, cybersecurity and cloud have held steady, but **AI/ML is a new addition to the top three, jumping from the lowest priority skill to one of the highest.**

The message is clear: AI/ML isn't going anywhere. If anything, it's fast becoming a foundational tech skill the same way cloud and security are.

In other words, we're moving beyond the hype: Artificial intelligence and machine learning (not just generative AI) have become deeply interwoven in all other tech domains, and people need the skills to match.

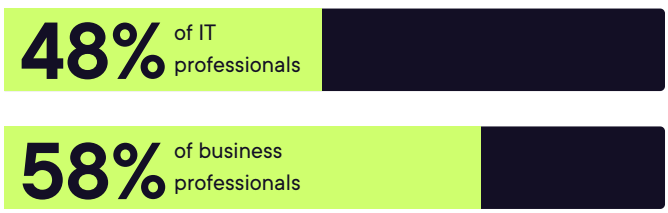
> *The sudden rise of AI/ML from a low-urgency skill to a top-three priority highlights the rapid evolution of technology, driven largely by the proliferation of generative AI. This shift has solidified the cloud's role as the vital platform for AI adoption. The most valuable skill set in the coming years will be at this intersection: understanding how to build, deploy, and secure AI systems within cloud environments.*
>
> Chris Jackson, Senior Author, Cloud, Pluralsight

47% of organizations have abandoned projects due to IT skills gaps

The tech skills gap has increased pressure on team members with specialized skills, reduced collaboration and efficiency across roles, and delayed or even shut down key projects.

In fact, **48% of IT professionals have had to abandon projects due to a lack of the right tech skills.** The number is even higher for business professionals: 58%.

This difference is key: Tech professionals aren't the only ones who need tech skills. When it comes to their ability to deliver, employees outside of IT roles actually need tech upskilling more than their tech counterparts.



have had to abandon projects due to a lack of the right tech skills

Down the line, executives and IT professionals worry the tech skills gap will mean they're unable to maintain legacy systems, adopt new technologies, and retain skilled employees.

Takeaway

Skills gaps put pressure on individuals and organizations, impacting their ability to deliver now and in the future. It's critical to close skills gaps in cybersecurity, cloud computing, and AI/ML in particular to deliver key projects, protect employees from burnout, and see future ROI.

The future of tech skills

The current industry, barriers, and skills gaps are already impacting the skills people need in the future. In fact, today's top skills gaps are the same as the skills IT professionals say are most important to learn in the next year.

Whether you're a leader or professional preparing for the future of tech, it's not about just being ready—it's about staying ahead to get value from new tech as fast as possible.

In-demand skills: Cloud, cybersecurity, and AI/ML

Executives say cloud, cybersecurity, and data will be the most important areas of growth for their business in the next year. This is where they're focusing their attention, so building up critical skills in these areas is key to preparing.

At the same time, **IT professionals say cybersecurity, cloud, and AI/ML are the most important to learn in the next year, while business professionals are prioritizing AI/ML, cloud, and DevOps.**

The common thread? Cloud, cloud, cloud.

That means cloud skills—particularly hybrid and multicloud—will continue to be important next year and beyond, whether organizations are catching up from lift-and-shift migrations, maintaining legacy systems, or looking to leverage cloud for AI/ML.

Top priority skills in 2026

Executives	IT professionals	Business professionals
Cloud	Cybersecurity	AI/ML
Cybersecurity	Cloud	Cloud
Data	AI/ML	DevOps

IT professionals' most important skills to learn next year match today's top three technical skills gaps. This isn't a coincidence—it's further confirmation that addressing skill needs today will set you up for future tech projects.

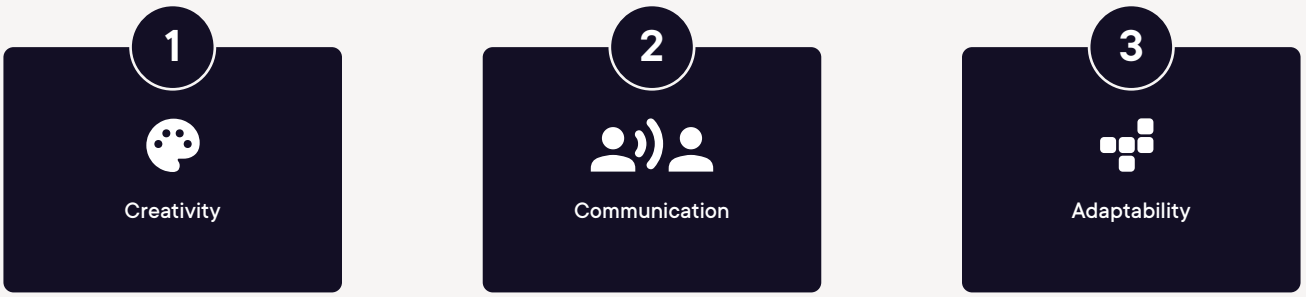
Soft skills will become even more important

There's one thing machines can't replace: Human originality.

As AI plays a larger role in streamlining operations and taking over routine tasks, soft skills are becoming even more important, and they'll play a larger role in day-to-day business operations, hiring decisions, and innovation in the next year.

The most important soft skills to build are creativity, communication, and adaptability. In other words, original ideas, the ability to communicate those ideas, and then change plans when priorities shift are what will help you and your organization stand out from the machines.

Top soft skills



> *Outsourcing creativity to machines is likely to produce underwhelming results. If you are lucky to have a creative streak, you're already one step ahead. The rest of us can develop our creative skills through story telling, imagination, and finding ways to use our creative muscles in our day-to-day roles, side-projects, and personal life.*
>
> Faye Ellis, AWS Community Hero and Principal Cloud Author, Pluralsight

AI will become an essential learning tool

AI is more than a new skill to learn—it's also a tool that can help you learn more efficiently.

100% of executives have started using AI to support tech upskilling efforts. Most notably, they're using it to automate training administration (like sending reminders), identify relevant learning content or training resources, and personalize learning paths based on role, performance, or career goals.

AI learning assistants can help leaders and practitioners cut through the noise and find the exact learning content for their needs. Just remember: AI isn't perfect. It's a tool for learning, not a replacement for expert instructors.

Map out learning journeys, provide course recommendations, and personalize learning for specific goals with Pluralsight's AI assistant Iris.

Takeaway

Existing skills gaps will only widen if left unchecked, impeding your ability to adopt new technologies. Starting to build in-demand skills across cloud, security, and AI/ML, strengthen soft skills, and use AI today will help you prepare for future developments.

How to overcome learning barriers and prepare for the future

While it can be tempting to jump straight into the next big thing, you have to overcome your current challenges to be truly ready for whatever's next. And to do that, you need continuous learning.

Tech and business professionals: Learn in-demand skills

For tech and business professionals, start by setting learning goals for yourself, outside of what's required by your organization.

For tech professionals, the top motivators to upskill are higher salary, personal achievement, and stronger job security and career advancement tied for third. For business professionals, the top motivators are improved job security, confidence, and more career options.

Once you've got a goal, build or strengthen the skills you'll need to get there. Those skills will depend on your goal and position, but cloud computing and general IT skills are some of the most important today, with cloud, cybersecurity, and AI/ML growing in importance over the next year.

Most important tech skills today

Executives	IT professionals
Cloud computing and infrastructure	Cloud computing and infrastructure
IT support and systems management	IT support and systems management
Cybersecurity and risk management	Data analytics, processing, and management
	Software development and automation

Leaders: Revamp your organization's learning culture

To set your organization up for success, start by reworking your learning culture.

Provide time to learn

Less than half (46%) of organizations provide time to learn on the job. The same number enables managers to give their team time to learn. Dedicated learning time is critical, and it involves more than a calendar block or a vague directive to "go learn."

Protect learning time
Set or allocate dedicated time to upskill and incorporate learning into the flow of work.

Enable managers
Make sure they understand upskilling is a priority and that timelines will need to shift for learning.

Tie learning to KPIs
Build performance metrics around learning for team members, managers, and top-level leadership.

Learn how to enable managers and roll out effective upskilling campaigns with the Tech Upskilling Playbook.

Find and fill existing skills gaps

If you're like many organizations, you've had to abandon projects because you didn't have the right tech skills.

Take a look at those abandoned projects. Are there any patterns? Are the same skills always missing? If the answer is yes, you've found a skills gap to target with upskilling.

If you don't see any noticeable patterns, ask employees to take skill assessments. These assessments give you an idea of current skill levels and gaps so you can design upskilling initiatives to address them.

And if you're still not sure, ask your technologists. **38% say their leaders are not aware of the IT skills gap.** As the ones responsible for executing your key initiatives, they've felt the impact of skills gaps the most and can identify some of the most critical areas your teams should focus on.

Assess your learning platform and resources

A skill development platform is only one part of the upskilling picture, but your learning investments should align with your teams' expectations.

Luckily, **executives and IT practitioners agree on the most important features in online learning platforms:** skill-based learning paths (e.g., beginner to advanced in Python) and role-based learning paths (e.g., beginner to advanced data scientist).

IT professionals are also looking for AI learning assistants, and business professionals want ways to track their knowledge mastery (like quizzes or achievements).

Conclusion

Keeping up with changing technologies means changing your approach to learning new skills

New technology, same learning challenges. As technology advances and people need to learn new skills, upskilling pays off, especially in comparison to hiring.

But the same challenges, lack of time and support, prevent leaders and professionals from closing skills gaps in cybersecurity, cloud, and AI/ML year over year.

To prevent those gaps from widening further, and to build future in-demand skills, learning needs to evolve alongside technology. For leaders, this means giving professionals more learning resources and support to enable a truly continuous culture of learning.

For leaders *and* professionals, it also means rethinking what you learn (whether that's AI or soft skills) and how you learn, like addressing existing skills gaps before jumping into the next new thing.

It may sound like it'll slow you down, but it'll actually enable you to move faster. Successfully upskilled teams won't have to learn the basics to start using emerging tech—they'll be able to dive right into whatever the future holds.

About Pluralsight

Pluralsight is *the* learning partner for today's technology teams and professionals. With our hands-on skills platform built by vetted tech innovators and practitioners, we help organizations and individuals develop their tech skills, build job-ready confidence, and accelerate business outcomes. Equip yourself or your teams with the skills needed to confidently adopt new technologies, execute strategic initiatives, and deliver improved outcomes.

Fill your skills gaps with Pluralsight.

Methodology

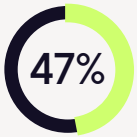
We partnered with Wakefield Research to understand the current tech skills landscape and provide leaders and practitioners with the insights they need to become future ready.

We surveyed 1,500 executives, IT professionals, and business professionals across the United States, United Kingdom, and India.

Position

	Executives CEOs, CFOs, CIOs, and other VP-level or higher who report to the C-suite	600	
	IT professionals Employees working in technology, IT, cloud, cybersecurity, and similar areas	600	
	Business professionals Employees at organizations outside of the technology, IT, cloud, etc. space who use tech tools	300	

Region

	United States	700	
	United Kingdom	500	
	India	300