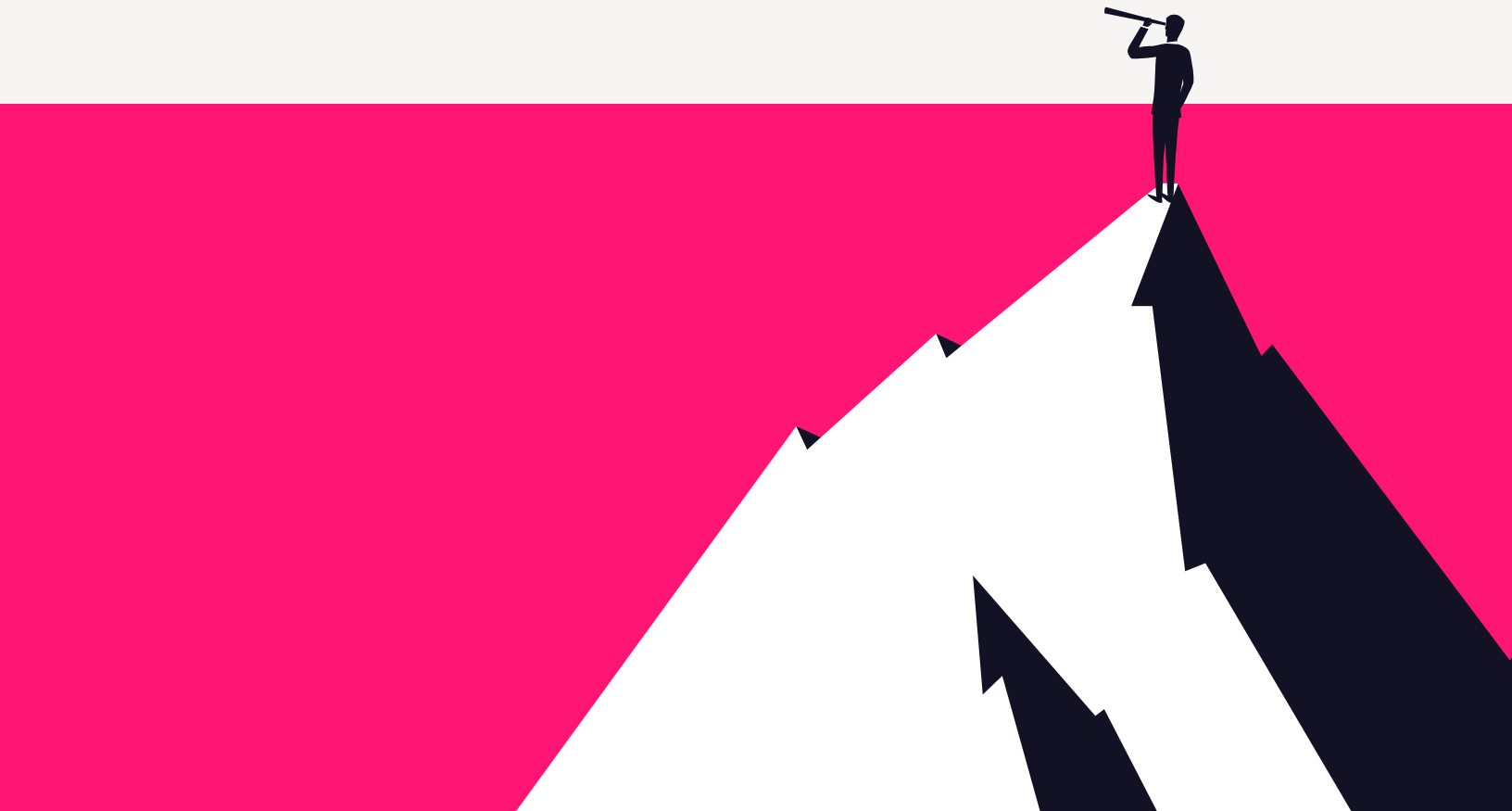
Pluralsight

2026 Tech Forecast

The top tech trends, tools, and skills



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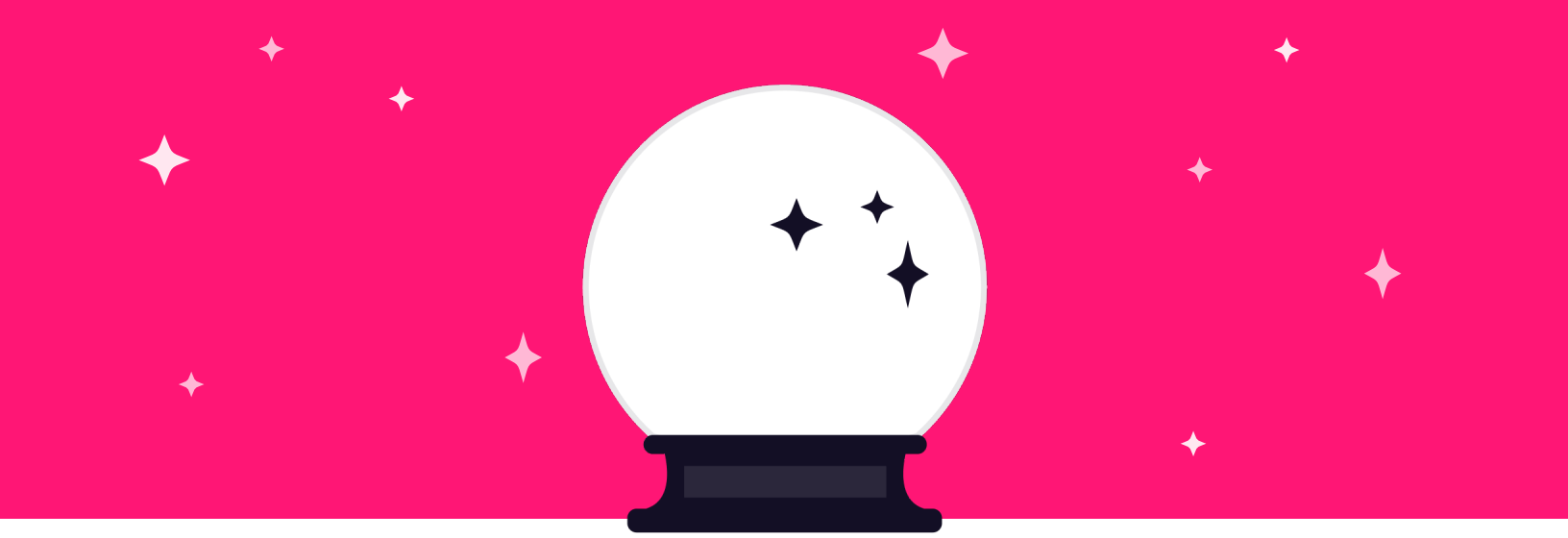


Introduction

Our 2026 tech trends and predictions

AI is changing everything, including what it means to be a tech professional. As fields become multidisciplinary, the boundaries between skill sets are fading, making it harder to define what's needed to succeed:

- **Software engineers** were once expected to be experts in programming (and, in most cases, cloud computing). Now, they also need to know how to securely use, implement, and verify the work of AI systems.
- **Cybersecurity specialists** suddenly need to have enough knowledge to mitigate AI's novel risks and new attack surfaces while defending against increasingly automated and AI-personalized attacks.
- **Data scientists** are shifting to think like systems engineers and work with temporal data to build production-ready AI systems.
- **Cloud computing professionals** who can build, deploy, and secure AI systems within cloud environments are suddenly in demand—a task requiring diverse skills.

All the while, the question remains—is this an AI bubble, and how long will it last? And, consequently, are the skills you're building dependent on an inherently uncertain future?

To help chart the way forward when change is the only constant, we've gathered insights from Pluralsight's community of 2,500+ expert authors and combined them with insights from 1,500 tech executives, IT practitioners, and business professionals to uncover the top tech trends, tools, and skills you need to know to get ahead in 2026.

Trending technologies and skills to learn about in 2026

1. The Big Three (AWS, Azure, GCP)
2. MCP servers
3. AI & cloud security
4. SQL
5. Python
6. Agentic AI
7. Executive-level communication
8. Critical thinking
9. SLMs
10. Network engineering

Popular topics among tech learners in 2025

1. AWS
2. Microsoft Azure
3. Python
4. Artificial intelligence
5. Kubernetes
6. Cybersecurity
7. DevOps
8. Data literacy
9. SQL
10. Containers
11. Network engineering
12. Java
13. Angular
14. Terraform

Universal tech predictions

1. The “AI bubble” will deflate—but not burst

Right now, we’re in a stock bubble 17 times larger than the one created by the dot-com frenzy. The question isn’t if it exists, but when and how the $1.5 trillion bubble will end.

We predict that while customer demand for AI will grow in 2026, the bubble will start to slowly deflate as GenAI companies struggle to find a path to profitability, all the while spending big on resource-hungry data centers. With enterprises spending $30 – 40 billion in GenAI in 2025 and 95% getting zero return, AI hype will begin to cool down in the C-suite.

> I believe there will be another AI winter, and I think the rush towards AI is a massive risk for the tech industry as a whole. The solutions are to continue to train people to become world-class designers and developers, so the upcoming generation of tech people can deal with the fallout and continue to build great solutions.

Mike McQuillan
Pluralsight Author, Head of IT at Halls, and Data and Software Development Specialist

According to OpenAI CEO Sam Altman, investors are overexcited about AI models, and "someone will lose a phenomenal amount of money" as a result. It's a belief shared by Jamie Dimon, head of JPMorgan Chase—the largest US bank, which is currently investing $2 billion annually into AI.

"The way I look at it is AI is real; AI in total will pay off—just like cars in total paid off, and TVs in total paid off, but most people involved in them didn't do well," he said.

Why won't the bubble just burst? Three factors explain why:

1. The main drivers behind AI investment are not small players but billion-dollar companies with solid earnings, like Microsoft, Google, Meta, and Amazon, who can absorb large losses.

2. Many governments believe they will rise or fall depending on how they adopt AI, prompting deep investment as a matter of national interest.

3. Investors will be willing to wait a few more years to achieve ROI on GenAI, betting that the technology is advancing on a quick upward trajectory.

> I think there will be a huge pullback on AI investments as most projects fail to achieve ROI. This will lead to hiring more humans. Rather than going all-in on AI, companies will instead sprinkle it in to improve processes and find where it fits. Tech workers will be expected to know and understand how to use AI tools for their work.
>
> **Kamran Ayub**
> Pluralsight Author, Founder of Keep Track of My Games, and Software Architecture Specialist

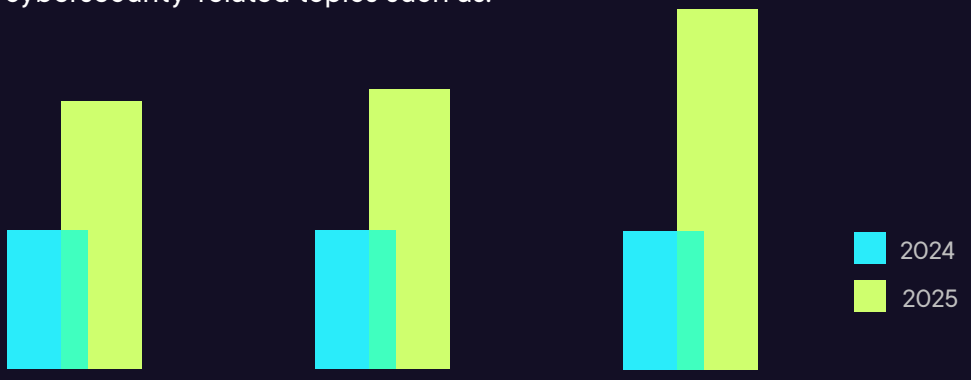
2. Cybersecurity will become an issue too big to ignore

For years, companies have kicked many cybersecurity cans down the road, unable or unwilling to deal with them: burnout, lack of skilled staff, escalating supply chain risks, quantum risk, and more. In 2026, teams will be stretched even thinner dealing with AI-driven threats and greater nation-state activity, forcing companies to invest more in security.

One of the biggest actions that companies will take is closing the cybersecurity skills gap. In 2025, this gap actually increased by 8% according to the World Economic Forum, with only 14% of orgs confident they have the people and skills they need today.

Tech practitioners ranked cybersecurity as the most important skill for them to learn in 2026, while executives ranked it as the second-most important growth area for their business, according to Pluralsight's most recent Tech Skills Report.

Organizations are already investing in these skills. In 2025, tech professionals dramatically increased their study of cybersecurity-related topics such as:



Cloud security
93%

Secure coding
102%

Security management
164%

Tech leaders face challenges from AI-powered attacks, stricter regulatory demands, and escalating supply-chain and identity risks. They must also manage talent shortages, education/upskilling, resource gaps, and the complexity of securing hybrid IT and OT environments.

The biggest shifts ahead are AI-driven offense and defense battles, post-quantum cryptography adoption, continuous adaptive trust replacing static zero trust, unified security platforms across cloud and identity, and a stronger focus on resilience over pure prevention. It's likely these will redefine how organizations secure data, systems, and people in 2026 and beyond.

Christopher Rees
Pluralsight Author, Principal AI Strategist
for Unisys, and Cybersecurity Expert

3. Successful companies will move from “AI as a product” to “AI as a solution”

In 2025, many companies took the approach of “let’s adopt/sell AI as a product,” followed later by “what business/customer problem are we using AI to solve?” As a result, few companies achieved ROI from these initiatives. According to MIT research, 95% of organizations saw zero return from GenAI. The same research found that successful adoption was only achieved between 5% to 40% of the time (depending on AI model selection).

Asking two simple questions could have prevented many of these incidents:

1. “What are the problems we and our customers face, and is AI the right solution?”

2. “If AI is the solution, what type of AI is the best solution, not necessarily GenAI?”

We’re moving from AI adoption to AI accountability. In 2026, the biggest shift will be how organizations measure and govern AI performance across the enterprise. It’s not just about what AI can do anymore, but whether it’s doing it responsibly, securely, and in alignment with business goals.

Kesha Williams
AWS Machine Learning Hero, Senior Director of Enterprise Architecture and Engineering at Slalom, and Pluralsight Author

Most companies are achieving results by using AI to automate or solve problems customers never see—back-office customer service processes, document processing, and agency spend reduction. Many software development teams are also using AI to create “nice-to-have” features on their backlog rather than selling AI as the feature itself.

From Pluralsight’s *AI Skills Report 2025*

Key takeaways

1. 2026 will mark a turning point for AI adoption—from chasing hype to building systems that actually deliver value through efficiency, specialization, and trustworthy outputs.

2. Companies will use upskilling to empower their teams to tackle challenges such as implementing AI-driven defense, post-quantum cryptography, mitigating supply chain risk, and securing hybrid IT and OT environments.

3. As the market’s understanding of AI matures, organizations will begin to focus less on purchasing or selling AI as a product and more on problem-solving with AI as a tool to help them achieve their goals.

Tech workforce predictions

1. 2026 will bring an even sharper decline in entry-level tech roles

Entry-level tech hiring has been on the decline since the pandemic, dropping by 50% at big tech companies and 30% at start-ups.

When Pluralsight reached out to its community of 2,500+ expert Authors, by far the most common concern was around AI replacing junior-level jobs, and how this could create a future shortage of experts. In some fields, such as cybersecurity, this shortage already exists.

> The threat is that if no company gives juniors a chance, then they won't become intermediate or senior developers, and there will eventually be a large gap that will be difficult for leaders to fill. Simply put, you need to invest in people so they can grow, and if AI doesn't evolve to replace all developers, then there's probably going to be a big knowledge gap.

Jon Friskics
Pluralsight Senior Technical Author and Software Development Expert

We predict the number of jobs will shrink even further, particularly for college graduates, due to a combination of factors:

- AI taking over the routine tasks that used to be entry points for newcomers
- Shrinking tech budgets for new hires
- Perception issues about Gen-Z employees and their teamwork and motivation
- Overwhelmed, risk-averse leaders who want staff who can hit the ground running

My biggest concern is the decline in opportunities for junior engineers and the wave of ongoing layoffs across the sector. As AI and automation streamline many development tasks, entry-level roles are disappearing, creating a widening gap between education and employability.

Without hands-on pathways, we risk losing an entire generation of emerging talent—and with it, the diversity and creativity that drive innovation.

James Willett
Pluralsight Author and AI/Cloud Architecture/Software Engineering Expert

2. Due to rising costs, companies will focus on internal hiring, upskilling, and retention

89% of organizations say hiring is more expensive than upskilling for IT roles, according to Pluralsight's latest Tech Skills Report. In 2025, the number of US companies paying $5K or more per hire jumped to 86% (previously 49%). There was a similar but less drastic jump in the UK, with 68% of companies spending more than £5k to hire IT staff (up from 54% in 2024).

In places like the US, the cost of upskilling existing staff has also gone down, with 73% of companies now paying less than $5K (up from 57%) and only 6% paying more than $10k or more (down from 30%).

Part of this reason will be the time it takes to find the right talent. In 2025, 89% of companies said it took longer to hire and train a new employee rather than upskill an existing one (up from 49%).

With shrinking IT budgets and a desire for staff with "known quantities," we predict that companies will focus on upskilling their existing IT staff and hiring career-switchers with proven track records from within their organization.

> Tech leaders should look within: identify colleagues who have tenacity and drive, who have an interest in technology, and invest in them. Train them, and give them time within work to train.
>
> **Mike McQuillan**
> Pluralsight Author, Head of IT at Halls, and Data and Software Development Specialist

3. Seasoned developers will struggle to educate leadership about GenAI's actual abilities

What is the key decision factor for a company replacing an IT worker with AI? Is it the capabilities of the IT worker, or what the AI tool can actually do? It's neither, instead coming down to *what leadership believes an AI tool can do, whether true or not*. By the time reality sets in, the job has already been replaced, even if the company later suffers the consequences.

For seasoned developers, the problem is many people think GenAI tools can already do their jobs or will be able to soon. Plus, the prospect of lower costs and higher profits makes this idea appealing to many companies. Hype over vibe coding strengthens that view, casting it as a developer replacement instead of an aid.

In 2026, senior developers will fight harder than ever to demonstrate their value rather than working quietly away, and explain why their hard-won wisdom is needed to hone AI output into something usable, secure, and maintainable.

> AI has been adopted at a fast pace and how to use it requires constant tweaks. After years of what looked like infinite budgets, companies are drastically cutting project times due to GenAI expectations and expecting teams to do more with less human resources. And of course, there's quite a bit of economic uncertainty. We've seen reorganizations, budget cuts, and layoffs, which adds extra pressure on tech teams within companies to make sure their value is visible.

Maaike van Putten
Pluralsight Author, Founder of BrightEdge Training Agency, and Software Development Expert

4. Professionals overusing AI will need to combat skills atrophy

GenAI works best as an assistive technology in the hands of an expert, one who sets the direction of its work and critically reviews what it produces—think an intern having their tasks dictated and work checked by a knowledgeable senior. However, this paradigm only works so long as the senior in question keeps their skills sharp: something that's increasingly difficult to do if you push everything on your AI intern.

In 2026, fighting skill decline will be a concern for all professionals, not just those in technical teams. All staff will need to keep their knowledge and skills up to date through upskilling on the side, keeping their critical thinking skills switched on, and regularly re-engaging with the tasks central to their role.

> In 2026 and beyond, there may be a loss of skills as people rely more on AI to do their thinking for them. As a result, roles could possibly become less fulfilling for many of us.

Faye Ellis
AWS Community Hero, Pluralsight Principal Training Architect – AWS, and Cloud Expert

> Over-reliance on LLMs leads to skill atrophy, a major danger since LLMs are unreliable coders. Leaders should upskill their staff to be proficient but skeptical LLM users, and especially skeptical when asking the LLM to do things they couldn't do themselves . . . strong core fundamentals is more important than ever in order to verify and validate LLM-generated code.

Tony Alicea
Pluralsight Author, Director of Education
at the Smyth Group and Web Development Expert

5. Pressure will mount on HR and L&D teams

As companies focus on retaining and nurturing their internal IT talent, they will need to deal with upskilling career switchers and maintaining the skills of their existing tech workforce. In fields such as AI, cloud, and cybersecurity, this will be vital to empower the business to meet numerous and complex challenges head-on.

Many companies will not take this path and will continue to outsource externally for IT roles, caught in a costly hiring and firing cycle with long time-to-fill, during which projects slow down, work piles up, and productivity drops. Meanwhile, gaps in AI literacy, security, and governance will pose business risks.

> My biggest concern is that we're innovating faster than we're educating. The gap between AI capability and AI literacy is widening. Without intentional upskilling, ethical oversight, and transparent governance, we risk building systems we can't fully explain or control. The solution starts with culture—embedding AI literacy, accountability, and continuous learning into every level of the organization.

Kesha Williams
AWS Machine Learning Hero, Senior Director of Enterprise Architecture and Engineering at Slalom, and Pluralsight Author

6. Tech practitioners will be at greater risk of burnout from upskilling and work demands

Upskilling is an essential tool in any organization, particularly in staff retention and project delivery. However, when organizations don't hire externally or internally to spread out workload, existing professionals can experience pressure to become a Swiss Army knife of tech skills. This can make them responsible for more domains than they can realistically handle, resulting in burnout and turnover.

In 2026, this risk will increase as many organizations will expect tech professionals to be savvy in AI and cybersecurity as well as their primary profession. Meanwhile, AI will transform professions like software engineering and cloud computing, making it hard for learners to keep up with the rapid pace of change.

> Individual contributors and leadership are struggling to keep up with the pace and rate of change that AI has introduced to their industries. There is an ongoing trend of burnout at the front lines of these changes, causing early career exits (both voluntary and involuntary) across the global workforce as we adjust to an increasingly digital and algorithmic way of life. Not only that, but new entrants are finding it harder than ever before to enter the workforce as they compete on a global stage that seems to shift daily. My heart goes out to all of us humanoids that are trying to find themselves and their place in this new world of ours.

Jacob Lyman
Pluralsight Author, Senior MLOps Engineer at Duke Energy Corporation, and AI Specialist

The current innovation and pace of change are both opportunities and challenges. The biggest challenge is to somehow keep up while not burning out and not spending all the energy on keeping up. Because that's so tough, it might also be the biggest threat because you risk running around chasing the newest things while not moving in the direction you actually need to go. I think the challenge is to know what to keep up with and be productive and intentional about keeping up.

Maaike van Putten
Pluralsight Author, Founder of BrightEdge Training Agency, and Software Development Expert

Key takeaways

1. For individuals looking to get their start in tech, portfolio projects and demonstrable experience will become even more important, with strong competition setting the bar to entry even higher.

2. As companies seek to hire internally and nurture existing talent, existing employees will have the opportunity to sidestep or advance in tech positions.

3. Senior developers will need to constantly demonstrate value and educate leadership about what GenAI can and can't do.

4. Tech leaders will need to ensure existing staff who work with AI heavily keep their skills and knowledge up to date, so they can properly spot and troubleshoot bad AI output.

5. With the rising cost of hiring and training new staff—and the inevitability of IT employee turnover—successful leaders will make upskilling an ongoing, high-level priority.

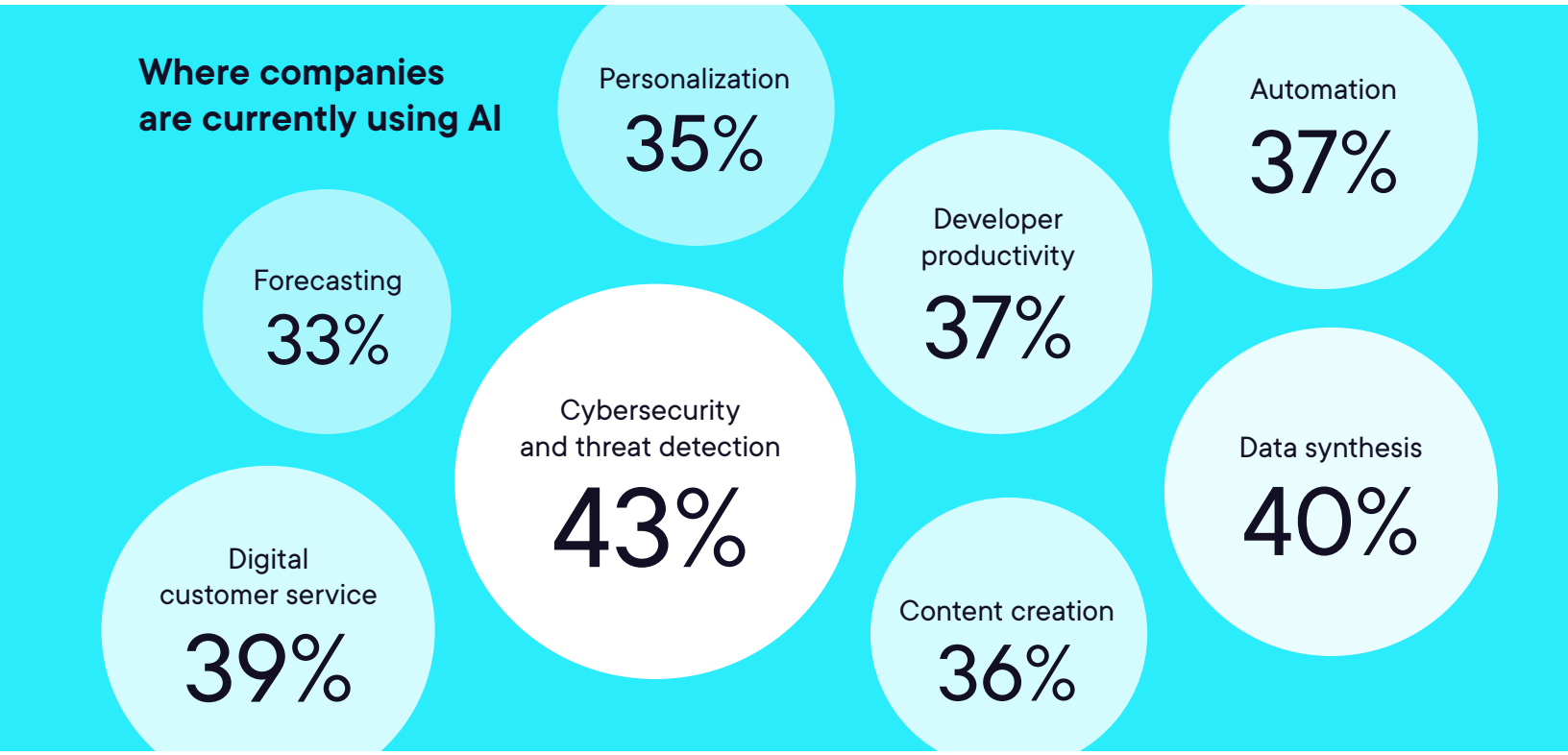
6. Savvy leaders will need to balance upskilling their existing IT staff with empathy and intentional alignment to business goals. Failure will result in employee turnover, and the organization widening skills gaps instead of reducing them.

AI predictions

1. Business will focus on interoperable, agent-driven architectures

Right now, agentic systems are limited by their ability to access what they need to be practically applied in enterprise environments, such as accessing external tools, systems, and data sources. In 2026, tech teams will be hard at work applying solutions like Model Context Protocol (MCP) to tackle complex workflows that traditional web UIs and APIs struggle with, aiming to shift from "forms-over-data" applications to conversation UIs with custom integrations.

Since even the best AI models currently struggle to use MCP, impacting performance as a result, a new range of models will be released that are fine-tuned to work with MCP and in other agentic use cases.



From Pluralsight's *AI Skills Report 2025*

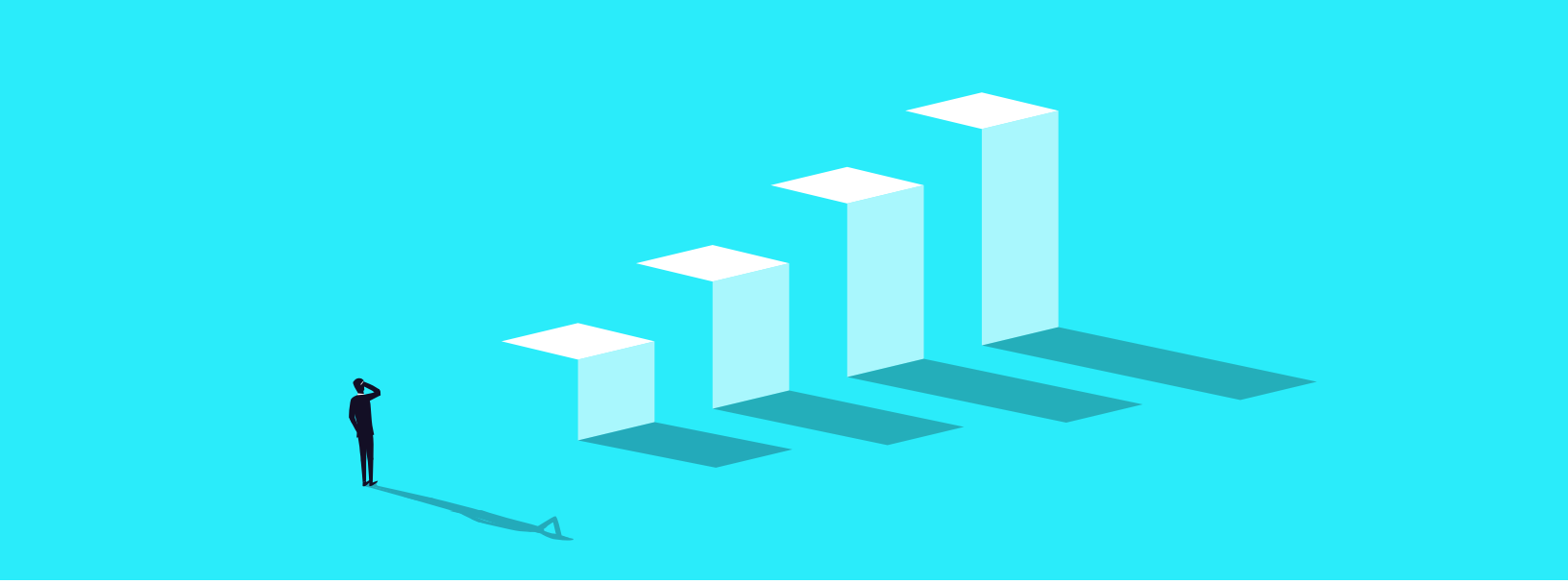
AI learning shifts among IT pros in 2025

LLMs	Ethical AI
+419%	-7%
ChatGPT	GitHub Copilot
-29%	-39%
Machine learning	Azure AI
+20%	+582%
Prompt engineering	Gemini
-14%	+316%

Pluralsight platform usage data (H1 2024 to H1 2025)

> Tech leaders should closely watch Model Context Protocol (MCP) and the rise of AI SDKs that standardize how applications interact with AI systems. Together, they'll enable interoperable, agent-driven architectures where models, tools, and data connect seamlessly—shaping the foundation for scalable, intelligent software ecosystems with long-term strategic impact.

James Willett
Pluralsight Author and AI/Cloud Architecture/Software Engineering Expert



2. Expect more features from GenAI companies (but not much progress in the LLMs behind them)

In 2025, OpenAI alone released a staggering number of features and services—ChatGPT Agent and Pulse, Sora 2, GPT-4o and 5, Codex, and more. Other GenAI companies have done the same, and while their user base expands, none are close to profitability yet.

We predict this won't change in the year ahead, and the number of releases will actually increase, driven by efforts to:

- Stand out from competitors, especially new challengers appearing unexpectedly (e.g., DeepSeek)
- Pursue market dominance rather than just market share
- Keep investors hyped and provide a path toward achieving ROI
- Manage rising capital expenditure in data centers and energy infrastructure to meet demand, and outpace AI-specific hardware depreciation

These feature releases will have another motivation in terms of LLM offerings like ChatGPT and Claude—showing progress because the underlying models have plateaued. One example of this is the lukewarm reception of GPT-5, which users found an underwhelming advancement.

3. Responsible, secure AI adoption will be a major business challenge (and experts will be needed)

IT teams will continue to struggle with AI governance in the year ahead. Adopting AI without proper consideration and oversight will result in security, compliance, and ethical issues. Meanwhile, organizations that overregulate or resort to AI bans will struggle with shadow AI, as users secretly adopt AI tools without IT knowledge.

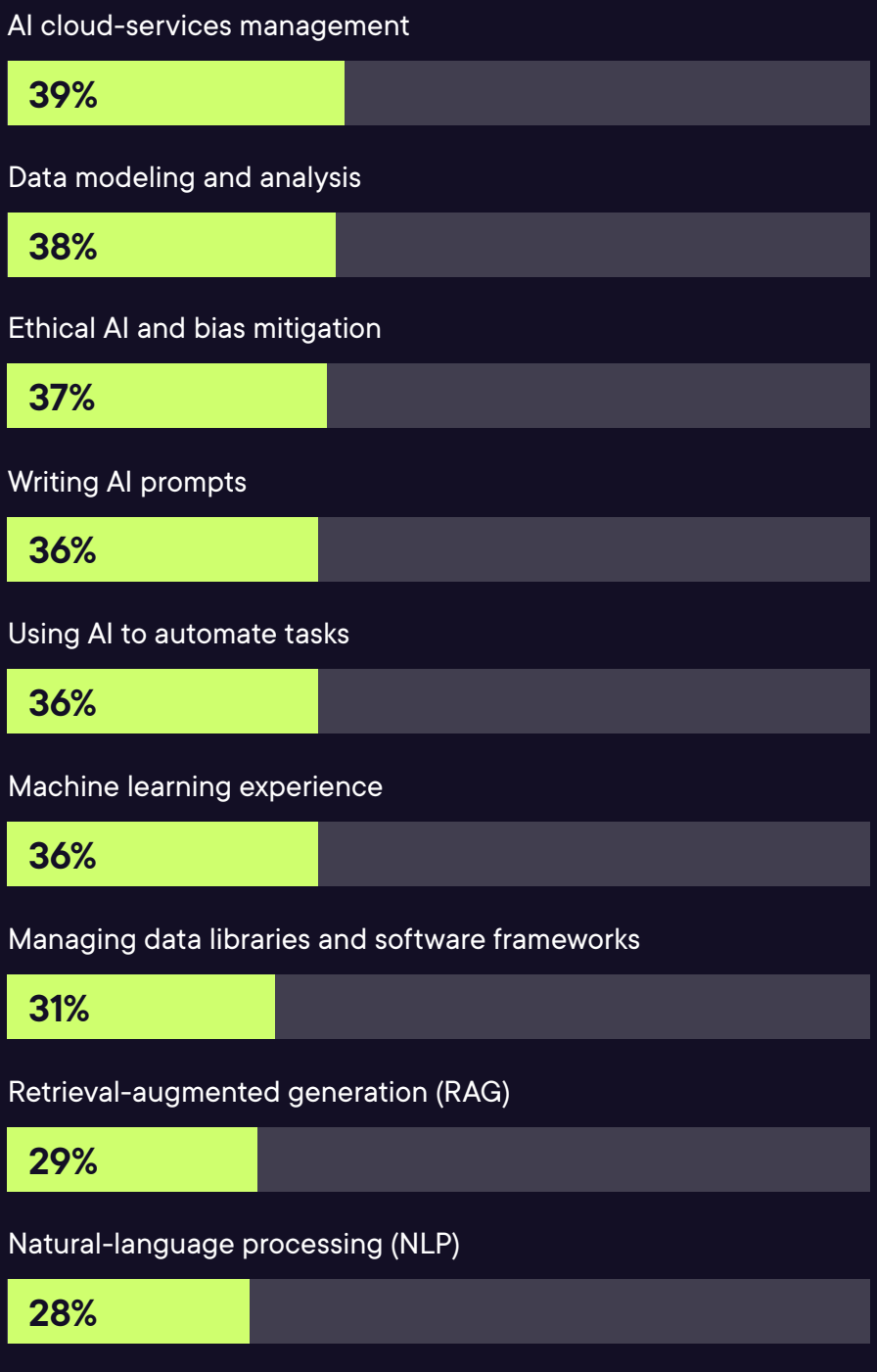
Success will only be found through the responsible vetting and adoption of AI tools. Organizations will be seeking AI governance experts and SMEs who can guide this transformation. In cases where none exist and budgets are tight, they will seek the "best fit" within their own ranks, taking staff in existing governance or IT roles and upskilling them in AI to fill this gap.

For savvy professionals, it's a chance to advance their careers, much like early pioneers in cybersecurity did in the 1990s on their way to becoming today's CISOs.

> The biggest driver of innovation right now is responsible AI governance. Organizations are realizing that trust and transparency are not roadblocks to innovation but accelerators of it. Frameworks like RAISE are helping teams move beyond theory by embedding accountability, compliance, and ethical design into every stage of the AI lifecycle. The companies that get governance right will lead the next wave of AI transformation.

Kesha Williams
AWS Machine Learning Hero, Senior Director of Enterprise Architecture and Engineering at Slalom, and Pluralsight Author

AI skills individuals and organizations are using right now



From Pluralsight's *AI Skills Report 2025*

4. Domain-specific local models will become more commonplace

In last year's *Pluralsight Tech Forecast*, we successfully predicted that organizations would start to move away from general-purpose LLMs and toward small language models (SLMs) that are fit for purpose. Clem Delangue, CEO of Hugging Face, predicted up to 99% of use cases could be addressed using SLMs.

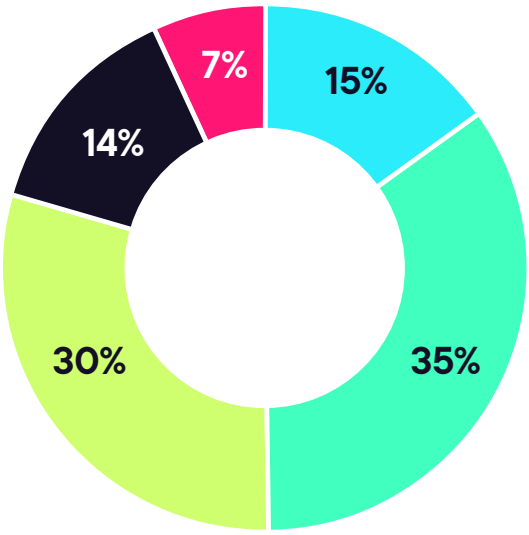
In 2025, many companies aggressively hired and upskilled their IT teams in foundational AI concepts and experimented with LLMs. As organizational AI maturity increases, there will be a pivot toward domain-specific SLMs that are cheaper to deploy and fine-tune, consume less energy, and are more fit for purpose. In a bid to prioritize data security and reduce cloud dependencies, some organizations will opt to run these locally.

> I've noticed a shift from experimenting with large language models, to building actual production systems around AI agents and smaller, task-specific models. Teams are re-architecting workflows using RAG and agentic patterns, making AI a core part of applications rather than an add-on.

James Willett
Pluralsight Author and AI/Cloud Architecture/Software Engineering Expert

5. AI SMEs will need to function as builders, translators, and truth detectors

AI skill exaggeration is extremely common, with 79% of professionals overstating their AI knowledge and 91% of C-suite executives, according to Pluralsight's recent *AI Skills Report*. Meanwhile, the AI industry is full of hype aimed at exciting leaders into quick adoption, leaving the experts who are tasked with adopting it to be the cold splash of water.



How often people lie about AI knowledge

- All the time
- Often
- Sometimes
- Rarely
- Never

From Pluralsight's *AI Skills Report 2025*

Professionals who can connect the dots between technology, governance, and business impact will lead the way. Standing out now means being both a builder and a translator—someone who can design AI systems that are powerful, ethical, and aligned with organizational goals.

Kesha Williams
AWS Machine Learning Hero, Senior Director of Enterprise Architecture and Engineering at Slalom, and Pluralsight Author

In 2026, IT professionals who have taken the time to learn about AI will be burdened with the task of explaining what AI can and can't do to leadership, acting as a translator for the business and reducing hype, all the while navigating egos and not taking anyone's AI knowledge for granted. This will enable organizations to make better strategic decisions and outmaneuver competitors.

> AI literacy is now essential. If you're starting out, you don't need to build models from scratch, but you must understand how AI, data, and cloud fit together to solve real problems.

Adam Bezance
Pluralsight Author and AI/Automation Consultant and Expert

Key takeaways

1. Cheaper, faster, and more open LLM models will emerge—along with innovative frameworks like MCP to support them—but the underlying models will see little meaningful advancement.

2. AI governance will be key to business success in 2026, with AI experts required to avoid the pitfalls of regulating too much or too little.

3. Successful companies will shift from using general-purpose LLMs toward smaller, task-specific models.

4. For professionals working with AI, developing strong communication skills will be the difference between being seen as a valued expert empowering the business or being a detractor blocking leadership's AI aspirations.

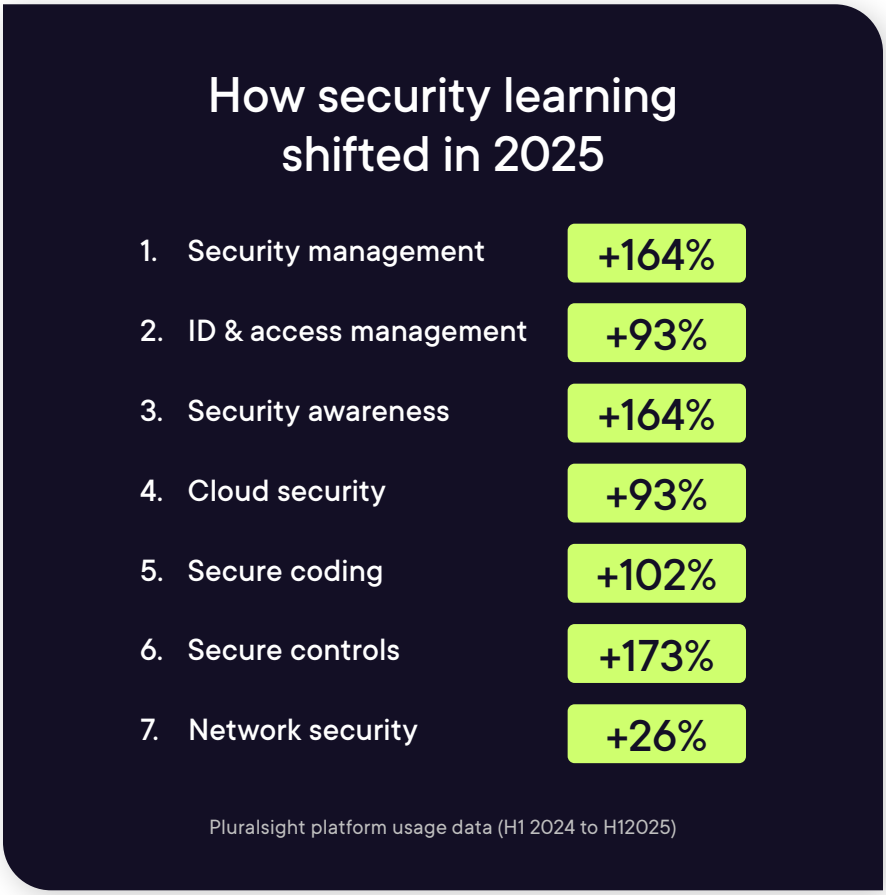
Cybersecurity predictions

1. Threat actors will use AI to supercharge and automate social engineering attacks

Modern cybercriminals don't hack in, they log in. 68% of cyberattacks involve a human element, such as an employee falling victim to a social engineering attack. In 2025, CrowdStrike research found that adversaries favor these types of attacks over traditional malware, particularly vishing (scam phone calls).

One such example was the Salesforce cyberattack campaign, in which hackers posed as Salesforce IT support and called the company's corporate clients, tricking them into downloading a modified Salesforce-related app.

The result? One billion customer records were stolen.



In 2026, threat actors will use AI to conduct similar social engineering attacks with greater sophistication and frequency, including:

- Scoping targets with AI to build detailed profiles based on digital footprints like social media and online activity
- Personalizing attacks with LLMs using data about a target's family, friends, and colleagues
- Crafting convincing phishing emails and hyperrealistic fake audio and video clips to deceive their target

Because the above tasks can be automated, this will become devastating for defenders who will face daily AI-powered cyberattacks, often highly personalized to the intended victim.

Top priority skills in 2026

Executives	IT professionals
1. Cloud	1. Cybersecurity
2. Cybersecurity	2. Cloud
3. Data	3. AI/ML

Pluralsight *Tech Skills Report 2025*

A key concern for 2026 and beyond is AI misuse: adversarial AI, deepfakes, and automated attacks scaling faster than defenses.

Christopher Rees
Pluralsight Author, Principal AI Strategist for Unisys, and Cybersecurity Expert

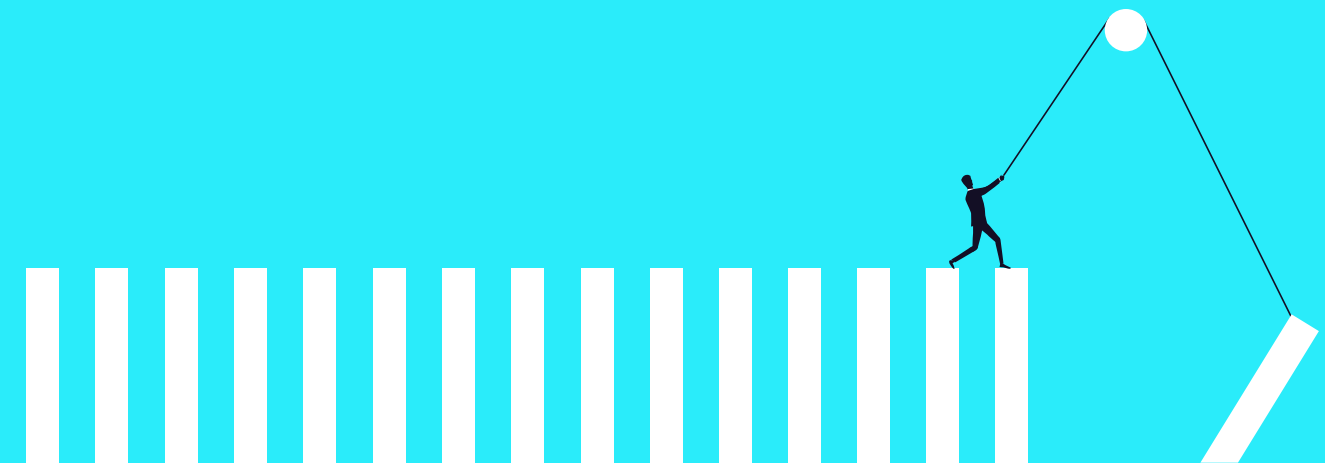
2. Post-quantum cryptography will be adopted . . . slowly

Quantum computing threatens to unravel modern cryptography in the near future, with experts predicting asymmetric cryptography will be unsafe by 2029 and fully breakable by 2032. Existing long-term data is likely vulnerable to Harvest Now, Decrypt Later (HNDL) attacks, where attackers exfiltrate data now and decrypt it at a later date.

There is a solution: switching to post-quantum cryptography (PQC). However, since switching encryption methods at scale takes time, organizations should be starting now. Some have started already, such as the engineering team behind the Signal Protocol, who have been upgrading to post-quantum since 2023 to protect users against HNDL and other future quantum attacks.

Data being encrypted today could be harvested and broken in the future. Adopting quantum-safe standards early protects sensitive information with long-term value (e.g., finance, healthcare, government).

Christopher Rees
Pluralsight Author, Principal AI Strategist for Unisys, and Cybersecurity Expert



3. Cyber supply chain risk management will become critical

In the year ahead, cybersecurity teams will have a pressing issue—making sure threat actors cannot damage their organization by exploiting external vendors, suppliers, contractors, and service providers. This will follow an ongoing trend: in 2024, the number of data breaches shared on underground forums jumped by 43%, according to Bitsight research.

One very public example of this type of attack was on Australian airline Qantas, whose customer data was exposed this year through a supply chain attack. During the incident, cyber criminals tricked a call center worker in the Philippines into giving them access to one of their third-party platforms (Salesforce).

> Tech leaders face challenges from AI-powered attacks, stricter regulatory demands, and escalating supply-chain and identity risks. They must also manage talent shortages, education/upskilling, resource gaps, and the complexity of securing hybrid IT and OT environments.

Christopher Rees
Pluralsight Author, Principal AI Strategist for Unisys, and Cybersecurity Expert

Key takeaways

1. Threat actors will use AI to strike organizations with automated, highly personalized social engineering attacks.

2. Forward-thinking organizations will start to switch to post-quantum cryptography (PQC), but many will drag their feet and be unprepared for future quantum attacks.

3. With AI-enabled advances in social engineering and the potential to automate attacks, supply chains will be at more risk than ever before.

Software development predictions

1. Everything will be AI-driven development, vibe coding, and debugging

Software engineering will be synonymous with AI, with some using it as an assistive technology, while others will use it to handle the bulk of their work in the form of vibe coding. They will also use agentic tools to automate processes and AI-powered IDEs as the norm. As a result, senior engineers will spend a lot of their time debugging AI-generated code, both self-generated and from colleagues.

There will be a continued trend of writing and reviewing code assisted by AI tools and agents. More developers using agentic tools like Claude Code, OpenAI Codex, Cursor Agent mode, etc. Agentic tools are interesting because of the tradeoff between saving time writing code and adding time reviewing code.

Jon Friskics
Pluralsight Senior Technical Author and Software Development Expert

2. Cybersecurity, software development, and QA will overlap due to AI

As software development shifts toward AI-driven processes, the risk of security flaws increases: unsafe dependencies, data leaks, training data poisoning, and more. At the same time, developers are less likely to catch these issues because they understand less of the code being generated.

To combat this, software developers will need to also be savvy in cybersecurity and quality assurance to mitigate these risks, leveraging concepts such as “never trust, always verify” to AI-generated code. Regular upskilling will be essential to stay aware of evolving risks, vulnerabilities, and best practices. For example, checking for copyrighted code that AI may add to projects, or making sure credentials have not been hard-coded.

> The rise in AI-enabled products (e.g., ChatGPT, GitHub Copilot, etc.) has introduced many security flaws in the process of developing and delivering quality software. Engineers are able to code faster than ever before without much thought. That’s fantastic, but can come with a weighty trade-off of tech debt and unforeseen issues down the road. I believe that we will begin seeing the impact of these security flaws as the months and years roll by. Some will be inconsequential while others will be severe.

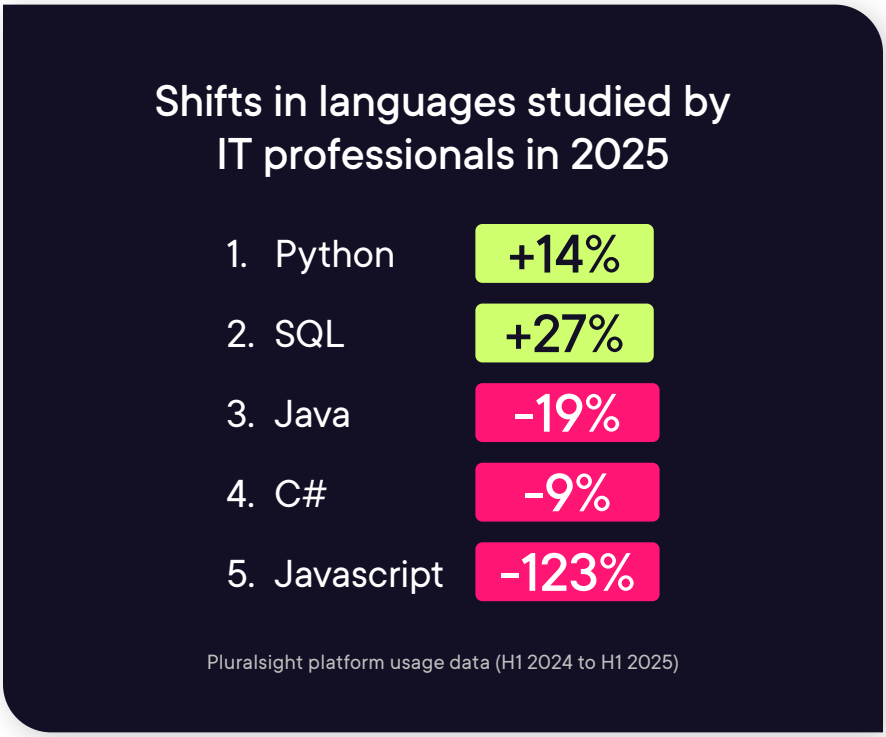
Jacob Lyman
Pluralsight Author, Senior MLOps Engineer at Duke Energy Corporation, and AI Specialist

3. As AI writes the code, developers will be split between the unsatisfied and the thriving

In 2026, seasoned developers will largely fall into two camps: those who are thrilled by the prospect of getting done what they want quicker with AI, and those who feel AI has sapped all the enjoyment out of the development process.

- For the former, AI will be seen as another form of abstraction, one that automates tedious work while still requiring a lot of knowledge and guidance.
- The latter will chafe with asking AI for the solution rather than coming up with it themselves, lacking the dopamine hit from hands-on programming and feeling they were handed the solution rather than earning it.

This is likely to occur in workplaces where credit is applied to the AI rather than the developer's steering of it and quality control.



Key takeaways

1. As AI-driven development and debugging become the norm, learning to quickly calculate where AI will save or cost time will be an essential skill for developers, as well as keeping knowledge current to interpret outputs.

2. Software developers will need to be increasingly skilled in secure software development and quality assurance in order to mitigate the risks of AI-generated code.

3. Some developers will struggle to find purpose as the task of hands-on programming is abstracted away, particularly where there are lower rates of employee recognition for AI-assisted tasks.

Cloud predictions

1. Organizations will return to cloud computing projects and skills

Executives say cloud computing is the most important area of growth for their business in 2026, with IT professionals ranking this as the second-most important area to upskill in, according to recent Pluralsight research.

This aligns with our database of 2.9 million tech learners, which showed the number one field tech professionals were upskilling in this year was not AI, but cloud computing.

> Cloud engineering skills are hugely important these days. Specific technologies I would highlight for entry-level practitioners would be AWS, Docker, Linux, Terraform, Ansible, Python, and Git. For experts, computer networking skills are valuable, particularly hands-on experience within AWS.

Jacob Lyman
Pluralsight Author, Senior MLOps Engineer at Duke Energy Corporation, and AI Specialist

2. Cloud computing—along with security and data management—will still be connected with delivering AI at scale

You can't run without solid ground beneath your feet, and reliable, secure cloud infrastructure is the foundation that organizations need to reach their AI objectives—along with the right data to work with.

In 2026, enterprise organizations with AI ambitions will invest in these areas, with increasing cloud maturing bringing many other non-AI benefits such as agility, elasticity, and cost savings.

Key takeaways

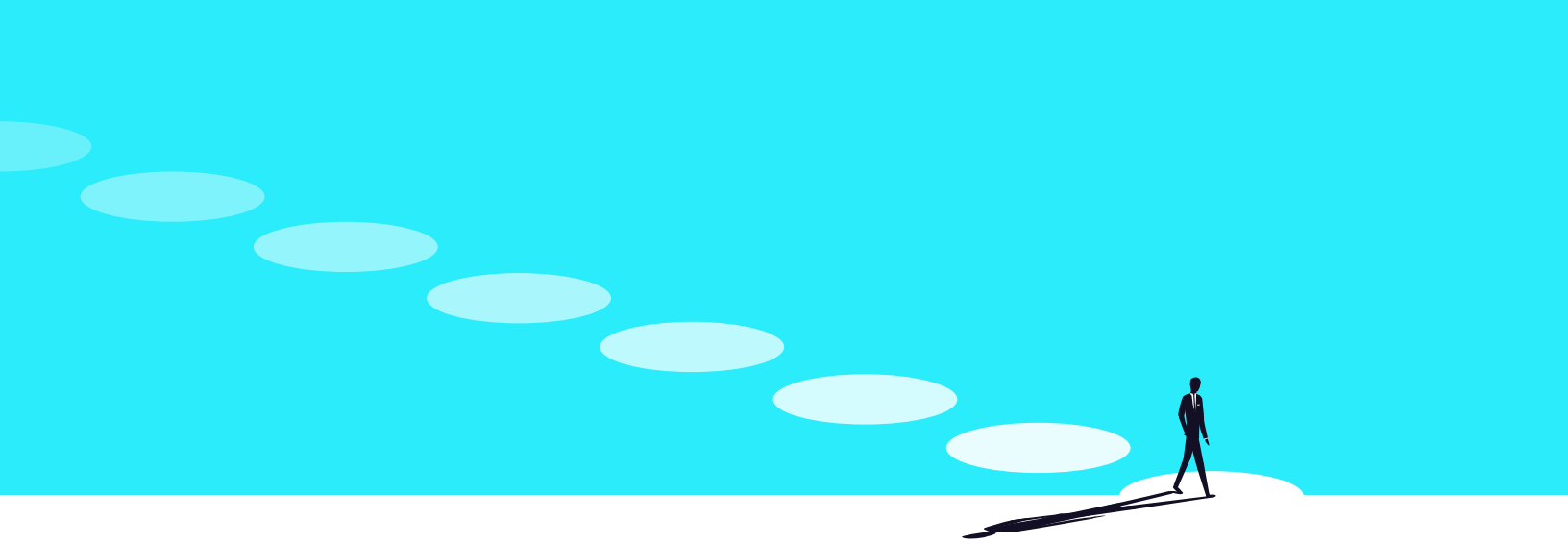
1. Cloud engineering will continue to be a growth area for most organizations, with a focus on hands-on experience.

2. Many organizations will need to achieve a higher level of cloud maturity to successfully achieve their AI ambitions.

The rapid maturation of AI is creating significant pressure on organizations and individuals who are lagging behind their foundational skills for cloud computing, security, and data management. These three components are prerequisites for effectively leveraging artificial intelligence at scale. Too often, the absence of these foundational skills results in promising prototypes and pilots that never achieve production readiness.

Drew Firment
AWS Hero, VP of Global Partnerships at Pluralsight, and former Director of Cloud Engineering at Capital One

Data predictions



1. Temporal data will be the new normal

Currently, machine learning has relied on static features, training on frozen moments in time. However, IoT and real-time systems operate in constant motion, and many important patterns and trends are dynamic—it's like examining a single photo for context rather than a livestream. In the year ahead, expect a move away from static data toward temporal data.

> Temporal data will eclipse static snapshots. Machine learning has traditionally relied on static features, but IoT and real-time systems operate in constant motion. The next breakthroughs will emerge from understanding how data changes—particularly, its rhythms, signatures, and trajectories over time. By 2026, analytics of temporal data will no longer be a specialized skill but a fundamental competency for leaders building resilient AI systems.

Ria Cheruvu
Pluralsight Author, Senior Trustworthy AI Architect at Nvidia, and Data and AI Expert

2. Data science will evolve into system science to deliver production-ready models

Data science is no stranger to evolution, starting with statistics and evolving to include AI, ML, and IoT. In the year ahead, the field will continue its multidisciplinary shift as data scientists also learn to think about dynamic systems, monitoring, and control.

3. SQL will still be an essential skill in 2026

SQL has jumped significantly in popularity among tech practitioners by 26% year-over-year, according to Pluralsight research, and now sits as the ninth most popular subject to learn among experts.

Almost every data technology supports SQL (or some variant), and it will remain a key skill for professionals of every stripe—be they data scientists, developers, product managers, or business analysts.

Real-world models run on messy, resource-constrained, real-time data across edge and cloud. Leaders need to train data scientists to think like systems engineers: orchestrating intelligence across these systems, handling temporal drift, processing feedback live, and balancing edge inference with cloud coordination. Those who don't will ship models that ace the lab and fail in production.

Ria Cheruvu
Pluralsight Author, Senior Trustworthy AI Architect at Nvidia, and Data and AI Expert

For people entering the industry, SQL is still essential, as well as a general understanding of database design principles, which can be applied to any paradigm, e.g., RDBMS, NoSQL, etc. A strong understanding of how applications are structured, e.g., N-tier, APIs, microservices, and how everything hangs together is also important.

Mike McQuillan
Pluralsight Author, Head of IT at Halls, and Data and Software Development Specialist

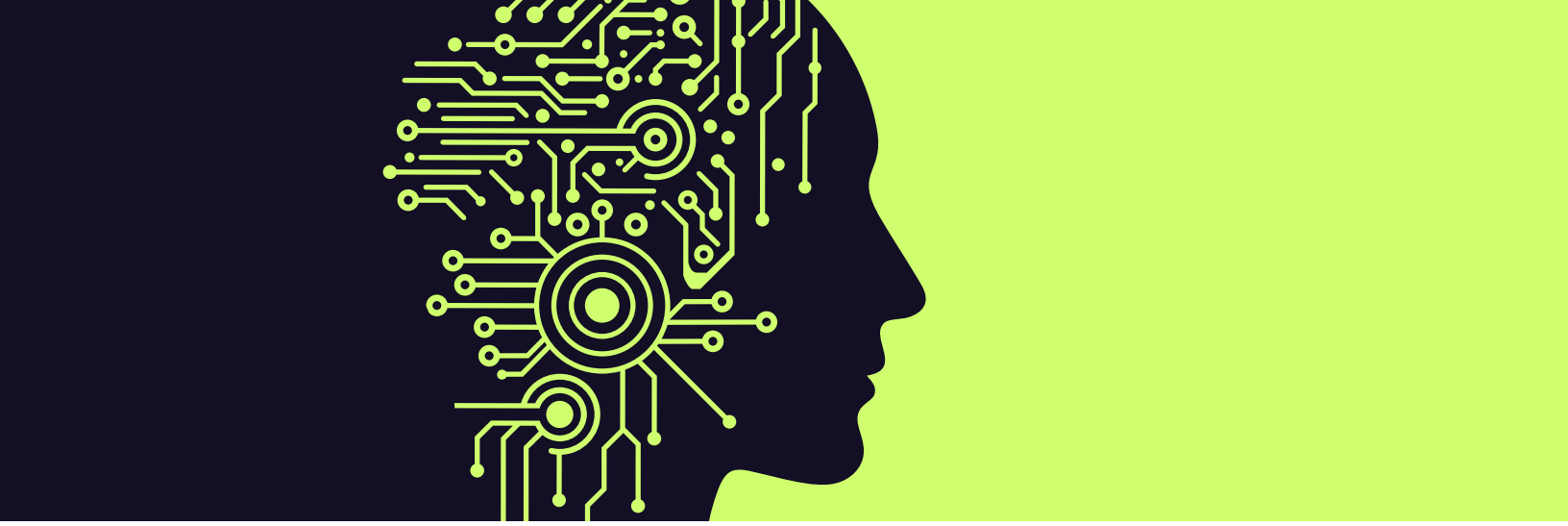
Key takeaways

1. Temporal data will be a fundamental competency for organizations building resilient AI systems.

2. Leaders will need to train data scientists to think like systems engineers, taking into account how models will actually work in production.

3. SQL and database design principles will continue to be highly valued skills in 2026.

IT leadership predictions



1. Tech leaders should keep a keen eye on autonomous AI

While a lot of the hype and speculation around Artificial General Intelligence (AGI) will likely continue in the year ahead, leaders should keep an eye on more specific advancements being discussed, such as agentic AI, MCP, edge intelligence, and automation solutions.

Leaders who combine their critical thinking and continuous learning skills will be able to identify which AI advances will actually provide a value-add to their organization, seizing the right opportunities and staying competitive.

> Tech leaders should be watching the evolution of autonomous AI systems that can reason, plan, and collaborate across domains. Agentic AI, responsible automation, and edge intelligence will redefine how organizations operate. The real long-term impact will come from how leaders integrate these technologies responsibly, with governance frameworks like RAISE that keep humans in the loop.

Kesha Williams
AWS Machine Learning Hero, Senior Director of Enterprise Architecture and Engineering at Slalom, and Pluralsight Author

2. In 2026, every company will be a technology company and have a need for IT upskilling

It doesn't matter if you're selling flights or furniture—any significantly large organization has technology investments. In the year ahead, it's essential for leaders to connect their talent strategy with these investments and value realization.

To do this, leaders should shift away from traditional measurements, like hours of training consumed, to focus more on aligning skill development with business outcomes. If scaling through headcount isn't feasible, technology should fill the gap.

> To survive and thrive in today's environment, leaders need to automate routine and repetitive work, invest in cross-skilling to empower individuals, and ruthlessly prioritize and focus only on what matters for generating business value.

Drew Firment
AWS Hero, VP of Global Partnerships at Pluralsight, and former Director of Cloud Engineering at Capital One

3. Successful leaders will create a culture of upskilling, from protecting time to celebrating wins

The number one barrier to upskilling is lack of time to learn—in fact, it's been the number one barrier for the last four years, according to Pluralsight research. Lack of engagement and leader support were also common barriers in 2025.

In the year ahead, the leaders that prevent burnout and retain staff will do so by balancing continuous education with tangible rewards, rather than motivating through mandate. Instead of one-off recognition, this will be part of the company's DNA—incentivizing, company hackathons, certification challenges, and making training relevant to both the business and the individual.

Identify the superstars in your own team, think about who already has an interest or talent for the skills that you need in your org over the next 3 – 5 years. Help your people to recognize their own talents and encourage them to develop the skills you need. Give them access to the tools they need to succeed, the training, and the time to learn.

Faye Ellis
AWS Community Hero, Pluralsight
Principal Training Architect – AWS, and Cloud Expert

Top barriers to upskilling

- Finding time to learn
- Low employee engagement
- Lack of leadership support

Leaders should focus on continuous, strategic upskilling . . . as technology cycles shorten, success will depend on teams' ability to learn, apply, and adapt rapidly. Investment should go beyond access to content—fostering guided learning paths, mentorship, and hands-on labs that align training with real business goals. Encouraging a culture where learning is measurable, rewarded, and embedded in project work will ensure teams stay both technically current and innovation-ready in 2026 and beyond.

By providing greater access to high-quality, continuous training, leaders can equip teams to handle rising complexity, improve efficiency, and maximize existing talent—ensuring growth without increasing headcount.

James Willett
Pluralsight Author and
AI/Cloud Architecture/
Software Engineering Expert

4. Investing in today's talent will mitigate future problems

With the number of entry-level positions shrinking due to AI and automation, it's important for leaders to still provide opportunities to bring in fresh talent—whether it's actively hiring graduates or giving existing employees opportunities to step into tech roles.

Not only will this help reduce the burden on existing senior staff in 2026, but it will also prevent costly and competitive hiring in the future when these professionals retire or move on. Additionally, hiring entry-level staff can help fuel innovation, as new professionals can bring fresh ways of thinking.

Key takeaways

1. Every organization will be a technology company in 2026, with a need for IT upskilling to connect their talent strategy with technology investments.

2. Successful education initiatives will balance upskilling with tangible rewards, creating a culture of continuous upskilling rather than running once-off activities.

3. Forward-thinking leaders will make space for entry-level positions to avoid hiring costly experts further down the line when senior staff inevitably churn.

Without hands-on pathways, we risk losing an entire generation of emerging talent — and with it, the diversity and creativity that drive innovation. The solution lies in reimagining career entry points: apprenticeship-style programs, open-source contributions as recognized experience, and AI-assisted mentorship that pairs juniors with senior oversight. Investing in structured, inclusive talent pipelines will be essential to sustain long-term industry growth.

James Willett
Pluralsight Author and AI/Cloud Architecture/ Software Engineering Expert

Conclusion

Even as AI expectations temper in 2026, it will continue to shape the tech landscape

Whether the AI bubble bursts spectacularly, slowly deflates—as we predict—or grows larger, the most important skills an IT professional can have are not specific technologies, but continuous learning and adaptability. These will serve you well no matter what happens, since you'll be up to date with all the latest knowledge and able to adjust at a moment's notice.

For leaders, forward-thinking and empathy are the keys. Hiring entry-level professionals or career-switchers within your organization then upskilling them into tomorrow's experts will help you in the future, while being sympathetic and supportive to the specialists you already have will aid with staff retention. Being aware of the increased expectations on tech professionals is a great start, and how much knowledge it takes to stay abreast of just one domain of expertise, let alone several.

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 independently adopt new technologies, execute strategic initiatives, and deliver improved outcomes.

Learn more about Pluralsight