# Companies increase investments in AI skills and security governance for 2025



Companies are gearing up to significantly increase their investments in artificial intelligence (AI) skills and security governance initiatives in the forthcoming year, according to the latest research from O’Reilly, detailed in their Technology Trends for 2025 report. This analysis draws on data from 2.8 million users using O’Reilly's learning platform, providing a detailed snapshot of current and emerging trends in the tech industry.

The findings indicate a remarkable uptick in interest in various AI skills. Notably, prompt engineering has surged by 456%, while learning about AI principles has increased by 386%. Generative AI, a hot topic in the field, saw a substantial rise of 289%. Among these trends, there was also a significant 471% rise in engagement with content about GitHub Copilot, a tool designed to assist developers in their coding tasks.

In contrast, some AI-related topics appear to be declining in popularity. O’Reilly noted a 13% decrease in the usage of GPT technologies, suggesting a shift in focus among developers. As reflected in the report, “developers are prioritising foundational AI knowledge over platform-specific skills to effectively navigate across various AI models such as Claude, Google’s Gemini, and Llama.” This shift signals a growing trend towards understanding the broader landscape of AI technologies rather than just individual platforms.

Security governance, risk, and compliance (GRC) have also emerged as focal points of interest, with a 44% rise in content consumption related to these areas. Additionally, application security saw a 17% increase, while the concept of zero trust—a cybersecurity approach—rose by 13%. These trends indicate that businesses are recognising the importance of robust security strategies as they integrate AI technologies.

The report includes other significant observations, such as a 29% increase in the demand for data engineering skills, while both Python and Java have experienced a decline in popularity. Interest in cloud computing has plateaued, suggesting that the landscape of programming languages and platforms is evolving.

Mike Loukides, vice president of emerging technology content at O’Reilly and the author of the report, reflected on the current phase of technological evolution, stating, “This year marks a pivotal transition in technology, with AI evolving from generative capabilities to a transformative force reshaping how developers approach their craft.” Loukides emphasised the importance of upskilling within organisations: “As foundational skills gain prominence and organisations increasingly adopt comprehensive security practices, professionals must prioritise upskilling to effectively integrate these tools into their operations.”

He concluded by suggesting that rather than fearing AI’s effects on employment, businesses should focus on harnessing its potential to enhance productivity and spur innovation across various sectors. The implications of these findings point to a future where AI capabilities play a crucial role in shaping both technological competencies and business practices.

Source: [Noah Wire Services](https://www.noahwire.com)

## Bibliography

1. <https://hrreview.co.uk/hr-news/l-d-news/oreilly-2025-tech-trends-report-highlights-ai-skills-growth-and-focus-on-security/378579> - Corroborates the O'Reilly 2025 Tech Trends Report findings on AI skills growth, including prompt engineering, AI principles, and generative AI, as well as the rise in security governance and compliance.
2. <https://www.oreilly.com/pub/pr/3465> - Provides details on the O’Reilly 2025 Technology Trends report, highlighting the dynamic landscape of developer learning driven by AI technologies.
3. <https://hrreview.co.uk/hr-news/l-d-news/oreilly-2025-tech-trends-report-highlights-ai-skills-growth-and-focus-on-security/378579> - Supports the information on the decline in GPT technologies usage and the shift towards foundational AI knowledge to navigate various AI models.
4. <https://hrreview.co.uk/hr-news/l-d-news/oreilly-2025-tech-trends-report-highlights-ai-skills-growth-and-focus-on-security/378579> - Confirms the significant rise in interest in GitHub Copilot and the growing importance of security governance, risk, and compliance (GRC).
5. <https://hrreview.co.uk/hr-news/l-d-news/oreilly-2025-tech-trends-report-highlights-ai-skills-growth-and-focus-on-security/378579> - Details the increase in application security and the concept of zero trust, highlighting the evolving cybersecurity strategies.
6. <https://hrreview.co.uk/hr-news/l-d-news/oreilly-2025-tech-trends-report-highlights-ai-skills-growth-and-focus-on-security/378579> - Supports the data on the growth in demand for data engineering skills and the decline in popularity of traditional programming languages like Python and Java.
7. <https://www.oreilly.com/pub/pr/3465> - Provides context on the annual usage data from O’Reilly’s online learning platform and its insights into top tech trends and tools for 2025.
8. <https://hrreview.co.uk/hr-news/l-d-news/oreilly-2025-tech-trends-report-highlights-ai-skills-growth-and-focus-on-security/378579> - Corroborates the plateau in cloud computing content usage and the slight growth in Google Cloud certifications.
9. <https://www.securitymagazine.com/blogs/14-security-blog/post/101275-data-deregulation-to-ai-protection-security-priorities-in-2025> - Supports the increasing focus on security and compliance, including the EU AI Act and its implications for AI security strategies in 2025.
10. <https://www.securitymagazine.com/blogs/14-security-blog/post/101275-data-deregulation-to-ai-protection-security-priorities-in-2025> - Details the importance of advanced data governance, management, and resilience strategies to secure AI tools and protect against cyber threats.
11. <https://sdtimes.com/ai/report-ai-and-security-governance-remain-top-priorities-for-2025/> - Please view link - unable to able to access data