

This year's top 8 use cases for AI, and what tech professionals need to support them

Enterprises pour money into AI initiatives and professionals focus on the basics.



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Knowledge-oriented tasks -- such as intelligent search and document digitization -- are topping this year's [artificial intelligence](#) (AI) business projects, according to a [survey](#) of 1,420 IT professionals conducted by Rackspace Technology and Amazon Web Services in January and February 2024.

The survey also showed that AI spending in 2024 is projected to more than double over 2023, equating to an

average of \$2.5 million per company. The spending ranged from \$500,000 to \$5 million among most companies in the survey.

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AI is at a practical stage. The prominent use cases gaining the most traction include intelligent search, document processing, fraud detection, and customer engagement. More than half of respondents cited these areas as priority activities.

"AI users seek visionary innovation and the ability to make better decisions. However, current AI projects focus more on enhancing existing products, services, and processes than creating breakthroughs," the survey's authors stated. Here are the leading use cases, per the IT professionals surveyed:

- Intelligent search - 62%
- Document processing (OCR, document classification, extraction, digitization) - 61%
- Fraud detection and cybersecurity - 56%
- Customer engagement (CRM, chatbots, call centers, customer affinity) - 54%
- Sales and marketing analytics - 46%
- Content generation - 43%
- Image and video recognition and classification - 40%
- Predictive maintenance - 34%

The survey also explored the leading types of technology investments and skills intended to support AI initiatives. Most technology purchases are set to focus on boosting machine learning and predictive analytics (57%), supporting the Internet of Things (51%), and super-charging robotic process automation (45%). Almost a third (31%) of purchases seek to instill AI within physical robots, and 27% seek to enable more AR/VR applications.

Organizations need people with the skills to design, build, deploy, secure, and maintain such applications -- and 46% of respondents said they need more of these people. That demand includes software developers with AI expertise (44%), machine learning engineers (42%), data analysts (41%), data engineers (41%), and data governance and security specialists (40%).

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In-demand skills include proficiency in programming languages such as R and Python, which topped the list at 49%, followed closely by the need for data scientists, data governance and security specialists, and data

engineers, all at 46%.

The security of AI applications and large language models also presents unique challenges. More than half (58%) of respondents viewed cybersecurity as the top concern and only 51% of professionals said they adhere to formalized data policies for compliance.

"The complexity of AI models and the vast amounts of data they process can create significant security challenges, necessitating advanced security protocols and threat detection," the survey's authors stated.

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Assuring AI isn't hallucinating or outputting erroneous information worries 30% of IT managers. "The consequences of inaccurate AI outputs can range from minor inconveniences to serious errors with far-reaching implications, emphasizing the need for rigorous testing and validation processes," the authors stated.

Bottom line: AI is the next stage in computing, requiring adjustments in skills mixes, security profiles, and corporate budget priorities. While many are excited by the prospects for innovation, AI will advance one bread-and-butter application at a time.

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