AI-Powered Automation in Business – Efficiency, Ethics, and the Importance of Collaboration

by Jens Kolby - Saturday, 2 August 2025, 2:13 PM

Number of replies: 2

How does AI-powered automation transform businesses?

A vast number of processes and services have been overtaken by AI automation, leading to increased efficiency and productivity. Repetitive, time-consuming tasks, such as scheduling, email sorting and auto-responses, Invoicing, filling forms, and many others, can now be handled by AI automation.

Moreover, according to Daugherty and Wilson (2025), AI-powered automation enables businesses to leverage real-time insights, combining various types of data without being limited to a single type of input, such as text or visual.

For management, this means faster and more informed decisions about strategic priorities, team development, and change management, ultimately enabling smarter decision-making (PwC, 2025).

However, the downside of AI automation is that it can lead to job losses and create requirements for upskilling employers. Companies also may become highly dependent on AI systems, making them vulnerable to technical failures or outages (AI Magazine, 2024). Many other concerns must be considered when discussing the implementation of automated AI.

What ethical concerns arise with AI adoption in business operations?

AI models trained on biased data can reinforce existing prejudices and discrimination, e.g., in hiring decisions. A notable case is Amazon, where in 2018, it was discovered that their AI recruiting engine “did not like women” (Dastin, 2018).

AI decision-making is also often highly opaque (Stanford, 2021), making accountability and responsibility very difficult to establish.

How do different computing disciplines (AI, cybersecurity, software engineering) contribute to AI-powered assistants?

The development of AI-powered assistants is not about AI alone. It requires several different computing disciplines to work together. For example, AI provides the ability to understand language and learn from data.

Software engineering builds reliable systems, while cybersecurity protects data and systems from attacks or misuse (NIST, 2023, p. 10).

To create AI assistants that are not only smart but also safe, a key principle within cybersecurity is used: the CIA triad (Chapple & Seidl, 2024).

Confidentiality makes sure that only those who are allowed can access the data.

- Integrity ensures that the data is correct and not changed by unauthorized people.
- Availability means that both data and systems are accessible when they are needed.

The rise of AI-powered assistants means that these disciplines now work together in more integrated ways because of the complexity and risks involved. This collaboration must remain close throughout the entire lifecycle of AI assistants.

References

AI Magazine (2024) What ChatGPT's Outage Highlights About Global AI Dependence. Available at: https://aimagazine.com/articles/what-chatgpts-outage-highlights-about-global-ai-dependence (Accessed: 2 August 2025).

Chapple, M. & Seidl, D. (2024) CompTIA Tech: CertMike Security+ (Exam SY0-701) Certification Guide. O'Reilly. Available at: https://learning.oreilly.com/library/view/comptia-tech-certmike/9781394290659/c32.xhtml#head-2-219 (Accessed: 2 August 2025).

Dastin, J. (2018) 'Amazon scraps secret AI recruiting tool that showed bias against women', Reuters. Available at: https://www.reuters.com/article/us-amazon-com-jobs-automation-insight-idUSKCN1MK08G/ (Accessed: 2 August 2025).

Daugherty, P. R. & Wilson, H. J. (2025) '3 Ways AI Is Changing How Companies Work', Harvard Business Review, January. Available at: https://hbr.org/2025/01/3-ways-ai-is-changing-how-companies-work (Accessed: 2 August 2025).

NIST (2023) AI Risk Management Framework (AI RMF 1.0). Available at: https://nvlpubs.nist.gov/nistpubs/ai/nist.ai.100-1.pdf (Accessed: 2 August 2025).

PwC (2025) Agent-powered performance: PwC unleashes generative AI to help people deliver greater value, PwC Newsroom. Available at: https://www.pwc.com/us/en/about-us/newsroom/agent-powered-performance.html (Accessed: 2 August 2025).

Stanford Encyclopedia of Philosophy (2021). The Ethics of Artificial Intelligence and Robotics. Available at: https://plato.stanford.edu/entries/ethics-ai/ (Accessed: 2 August 2025).