

Module 1 – Unit 1

Forum Discussion Post

AI-Powered Automation in Modern Business

Student: Mariam Al Obaidly

Programme: MSc Artificial Intelligence

University: University of Essex Online

Date: 9 February 2026

Discussion Contribution,

AI-powered automation has significantly transformed modern businesses by automating routine and repetitive tasks, improving operational efficiency, and enabling data-driven decision-making. Through intelligent systems, organizations are able to enhance productivity, reduce human error, and deliver faster and more personalized customer experiences. Rather than simply replacing human workers, AI-powered automation often supports and augments human decision-making, allowing employees to focus on higher-value and strategic tasks (Brynjolfsson and McAfee, 2017; Raisch and Krakowski, 2021).

Despite these benefits, the adoption of AI in business operations raises important ethical concerns. One key issue is the impact of AI-driven systems on market fairness and consumer welfare, particularly when algorithms are used for dynamic pricing. Ezhachi and Stucke (2023) highlight that pricing algorithms can unintentionally align competitors' pricing strategies through *tacit algorithmic collusion*, even in the absence of explicit agreements. This can reduce competition, increase prices above competitive levels, and harm consumers. Additionally, the complexity and opacity of AI systems reduce transparency, making it difficult for both consumers and regulators to understand, challenge, or hold organizations accountable for automated decisions.

Addressing these opportunities and challenges requires the integration of multiple computing disciplines. Artificial intelligence provides the core capabilities for learning, reasoning, and natural language interaction that enable AI-powered assistants to function intelligently. Software engineering ensures that these AI systems are reliable, scalable, and effectively integrated into organizational

workflows and business platforms. At the same time, cybersecurity plays a critical role in safeguarding sensitive data, protecting user privacy, and maintaining trust in AI-powered systems. Together, these disciplines enable the development of AI-powered assistants that are not only effective and efficient, but also secure and ethically responsible in business environments.

## References

Brynjolfsson, E. and McAfee, A. (2017) *The business of artificial intelligence: What it can—and cannot—do for your organization*. Harvard Business Review.

Ezrachi, A. and Stucke, M.E. (2023) *The Role of Secondary Algorithmic Tacit Collusion in Achieving Market Alignment*. Working paper CCLP(L)54. University of Tennessee College of Law. Available at: <https://ssrn.com/abstract=4546889> (Accessed: 8 February 2026).

Raisch, S. and Krakowski, S. (2021) 'Artificial intelligence and management: The automation–augmentation paradox', *Academy of Management Review*, 46(1), pp. 192–210. <https://doi.org/10.5465/amr.2018.0072>