**Initial Post**

by [Majed Alzaabi](https://www.my-course.co.uk/user/view.php?id=26258&course=13458) - Saturday, 17 May 2025, 9:43 PM

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The advent of Industry 4.0, which specializes in automation, big data, artificial intelligence, and real-time analytics, has ushered in great change to financial sectors and industries. Through consumer segmentation, the technologies have improved fraud detection, prevented anomalies, and offered personalized financial services, and have rendered operations more efficient and facilitated algorithmic trading. For example, while machine learning algorithms are being utilized more and more for credit scoring and portfolio optimization in investment, robotic process automation (RPA) has automated back-office functions like KYC verification and loan approvals (PwC, 2019). Yet, this development has also brought in new risks. Overdependence on information technology exposes financial institutions to cyber risks and system downtime, as witnessed in the TSB Bank's 2018 IT failure that denied customers access to their accounts and cost the bank over 300 million euros in losses (FCA & PRA, 2022).  
Moreover, ecosystems which are fully automated ,created by industry 4.0 are ever more vulnerable to AI-powered social engineering attacks (Lucia Stonham, 2025).  
Any type of hack that endeavors to influence human action qualifies as a social engineering attack. These attacks seek to deceive a person into divulging secret information, transferring funds, or allowing system access. AI can, determine vulnerable targets in an organization, generate realistic fake personas and online profiles, Design realistic attack scenarios, Generate tailored messages or multimedia (e.g., voice or video) to trick and engage with targets, Artificial intelligence improves the targeting, scalability, and stealth of such attacks. These threats take advantage of human decision-making process neglect, thereby calling for human for human -in- the - loop designs stressed in Industry 5.0.  
By re-establishing human control and emphasizing ethical, sustainable, and resilient finance, Industry 5.0 builds on these gains.

References:

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