

COLLABORATIVE DISCUSSION 1: THE FOURTH INDUSTRIAL REVOLUTION

Maria Ingold
12693772
Unit 3
Machine Learning
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SUMMARY POST

Industry 4.0, The Fourth Industrial Revolution, focuses on automation, while the Fifth Industrial Revolution, Industry 5.0, shifts to augmentation and human-machine collaboration (Schwab, 2016; Ziatdinov et al., 2024). Ziatdinov et al. (2024) identify potential negative impacts from automation, exemplified by the Red Bee Media service outage which affected UK broadcasters (BBC News, 2021; Ofcom, 2022a). Although there was no fire, the automated fire suppression systems triggered, destroying hard disks, and the backup failed (BBC News, 2021; Clover, 2021; Ofcom, 2022a). Crucially, Channel 4 was unable to provide subtitles for Freesat customers for approximately two months, constituting an accessibility regulatory breach (Ofcom, 2022b). Ofcom recommended improved communication and disaster recovery.

Adams (2024) observes that Internet of Things (IoT), a core part of Industry 4.0, can address fire suppression. Venkatesan et al. (2023) suggest that IoT sensor data enables remote monitoring which would have permitted human awareness and intervention. Adams further suggests resolving on-premise hardware outages by utilising cloud computing, another component of Industry 4.0. While this shifts responsibility of the hardware to the cloud service provider, addressing fires remains an issue. However, cloud simplifies and speeds up failover and re-deployment, which could mitigate downtime (Segun-Falade et al., 2024). Nevertheless, new equipment and training can be expensive, and intellectual property must be secured online (Arroyabe et al., 2024; Kanuri, 2024; Ziatdinov et al., 2024).

Both Adams' (2024a) and Zapka's (2024) initial posts on CrowdStrike observed that interconnectedness, a key component of Industry 4.0, led to widespread disruptions. Ogundipe and Aweto (2024) clarify that the root cause was not security, but a faulty update from software designed to protect against cloud cyber breaches. Additionally, the update conflicted with cloud services provided by Microsoft Azure (Appidi, 2024). In both the Channel 4 case and CrowdStrike, disaster recovery and communication were essential for mitigation and resolution.

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