**Unit 1 Artefact**
Collaborative Discussion 1: The 4th Industrial Revolution 'Summary Post' 300 words.

The discussion topic for this unit was an article about how we respond to what the fourth industrial revolution means to the world (Schwab 2016). What struck me initially is the defining features of industry 4.0: velocity, scope, and systems impact. These are characterised by exponential evolution and disruptive innovations. The speed of current breakthroughs is unprecedented and governance, regulation and the law are struggling to keep up.

The specific incident I researched was the NHS WannaCry Ransomware Attack (NHS England 2023). This incident illustrates the significant impact of an information system failure in healthcare, a data safety-critical environment. The WannaCry ransomware affected many organisations globally, with the NHS being one of the most significantly impacted.

There were several implications. For patients, the incident caused widespread disruption to NHS services. Thousands of appointments and surgeries were cancelled, ambulances were diverted, and patients were turned away from A&E departments. This not only caused distress and inconvenience to patients but also had potentially life-threatening implications for those requiring urgent care or cancer treatment. The financial implications for the NHS were substantial. The Department of Health and Social Care estimated that the incident cost the NHS £92 million. This includes the costs of IT support to restore systems and the lost productivity due to cancelled appointments and procedures. The reputational damage to the NHS was significant. The incident highlighted vulnerabilities it's IT infrastructure, leading to a loss of public trust in the system's ability to protect sensitive health information and maintain essential services. The attack also raised serious questions about cybersecurity practices and preparedness within the NHS.

Machine learning applications could strengthen cyber security and detect threats before they become a serious incident. In safety critical environments such as health, involving health professionals and patients as users/generators of the data will be essential.

**References:**

digitalhealth. Government puts cost of WannaCry to NHS at £92m.Online at: https://www.digitalhealth.net/2018/10/dhsc-puts-cost-wannacry-nhs-92m/# Accessed: 05.05.2024

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NHS England. NHS England business continuity management toolkit case study: WannaCry attack. Online at: https://www.england.nhs.uk/long-read/case-study-wannacry-attack/ Accessed: 05.05.2024.