

Daily Assessment format

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Course: Introduction to IOT

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Topic: Everything can be Automated

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Report

→ What is Automation?

Automation is any process that is self-driven & reduces, then eventually eliminates, the need for human intervention.

Automation was once confined to the manufacturing industry. Highly repetitive tasks such as automobile assembly were turned over to machines & the modern assembly line was born. Machines are excellent at repeating the same task without fatigue & without the errors that humans are prone to make in such jobs. This results in greater output, because machines can work 24 hours a day without breaks. Machines also provide a more uniform product.

→ What is Artificial Intelligence & Machine Learning?

Artificial intelligence (AI) is the intelligence demonstrated by machines. This is in contrast to natural intelligence which is the intelligence displayed by living organisms. AI uses intelligent agents that can perceive their environment, & make decisions that maximize the probability of obtaining a specific goal or objective. AI refers to systems that mimic cognitive functions normally associated with human minds such as learning & problem solving.

→ ML IN IOT

One of the features of the IOT is that it enables the collection of extremely large pools of data that can "teach" programs how to respond in certain conditions. Some of the more common uses of ML technology include

- Speech recognition
- Product recommendation
- Shape Recognition
- Credit card fraud detection:

A profile is constructed about the purchasing patterns of a client. Any deviation from these patterns triggers an alert & the system automatically takes action. This action ranges from denying the transaction to notifying the authorities. Some of the events that are detected & could indicate a fraudulent transaction include purchasing products not normally purchased, purchases in a diff geographic area, rapidly purchasing many different products, & purchasing large-ticket items.