



MANUFACTURING
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Definition of AI: Artificial Intelligence

AI is the theory and development of computer systems able to perform tasks that normally require human intelligence. It has a wide variety of uses, such as visual perception, speech recognition, decision-making, and translation between languages.

AI is also known as machine intelligence, a branch of computer science that works to create intelligent machines to imitate human behavior, in contrast to natural intelligence displayed by humans. Rapid advances in recent years in machine learning techniques and sensors have helped produce a brand-new generation of robots.

In manufacturing, AI enables companies to completely transform their processes. It allows them to harness vast amount of data, information and operations technology, add context, and transform that data into perspective and predictive insights that can orchestrate a more rapid response. AI presents the opportunity for manufacturing systems to autonomously learn and adapt. This will yield much higher levels of productivity. It will also reduce costs, facilitate more rapid decision making, improve scalability. Yet AI will also require transformation from a secure connectivity, enabling analytics and digital workforce capabilities perspective.

Industrial robots are capable of doing recurring activities, designing the production model, building automation solutions, eradicating human error and delivering superior levels of quality assurance. While humans are forced to work in 3 shifts for ensuring continuous production, robots can work 24/7 in the production line. As robots replace humans in performing overly laborious and risky activities, the number of injuries and workplace accidents decrease.

This increased use of robots enables workers to focus on more complex and innovative tasks. This, in turn, requires a more continuous process of workforce retraining and upskilling.

Sources:

Merriam Webster

Tristian Kanwar, Rockwell Automation

https://en.wikipedia.org/wiki/Artificial_intelligence

<https://www.plantautomation-technology.com/articles/the-future-of-artificial-intelligence-in-manufacturing-industries>