

What is Artificial Intelligence?

Artificial Intelligence refers to technologies that enable machines to analyse data, recognise patterns and support decision-making processes.

In industrial environments AI is mainly used to analyse production data and improve operational efficiency.

Examples of AI in Manufacturing

Automated Quality Inspection

Computer vision systems detect defects in products during production.

Benefits:

- faster inspection
- higher accuracy
- reduced manual work

Predictive Maintenance

AI models analyse sensor data to predict machine failures before they occur.

Benefits:

- reduced downtime
- improved maintenance planning

Production Optimisation

AI analyses production data to identify inefficiencies and optimise workflows.

Benefits:

- improved productivity
- reduced waste

Energy Consumption Optimization

AI technologies are designed to reduce energy use in industrial operations.

Benefits:

- lower energy costs
- reduced emissions
- more sustainable operations

AI Glossary

Artificial Intelligence

Computer systems performing tasks that normally require human intelligence.

Machine Learning

Algorithms that learn patterns from data.

Computer Vision

AI technology that interprets images and videos.

Predictive Maintenance

Using AI to predict equipment failures.

Digital Twin

Virtual representation of a physical system.