3.5 Artificial intelligence



Artificial Intelligence (AI) is an area of computer science that emphasises the creation of intelligent machines that work and react like human beings.

Kaplan and Haenlein describe AI as "a system's ability to correctly interpret external data, to learn from such data, and to use those learnings to achieve specific goals and tasks through flexible adaptation".

Machine learning

Machine learning is a subset of AI, in which AI computer code is built to effectively mimic how the human brain works. Algorithms detect patterns and learn how to make predictions and recommendations rather than following explicit programming instruction. The algorithms themselves then adapt to new data and experiences to improve their function over time.

Generative AI (GEN AI)

GEN AI is also a subset of AI. It specialises in producing new, original content by copying patterns and structures in existing data. It uses advanced machine learning to produce new text, images, audio, video or code.

Uses of AI

- Content creation and editing
- Design and prototyping
- Personal and professional support
- Data enhancement
- Research, analysis and decision making

Humans and AI

Humans should not rely totally on AI but might use it for:

- Collaboration
- Review
- Skill enhancement

Benefits and dangers of AI

Benefits	Dangers
➢ Improved productivity	➢ Ethical concerns
➢ Motivation	➢ Bias
➢ Availability	➢ Resource intensity and cost
➢ Efficiency	➢ Variable quality
➢ Reduction in operational costs	➢ Lack of creativity
➢ Innovation	➢ Lack of emotional intelligence
➢ Personalisation	➢ Encourages human laziness
	➢ Risk to employment

Illustrations

Read illustrations 5, 6 and 7 from Chapter 5 of your Study Text.

ST Now try TYU 3 from Chapter 5.

Notes