Artificial Intelligence Definition

Luís Macedo

University of Coimbra

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Definition of AI

- Science that studies and models forms of intelligence
- Engineering practice of incorporating intelligence into machines
- Tool to mimic, model, and augment (mainly) human intelligence
- Science and engineering of artificial intelligent agents

Components of Intelligence

- Reasoning
- Problem-solving
- Learning
- Decision-making
- Adaptability
- Ability to acquire, understand, and apply knowledge
- Goal achievement across diverse environments

Forms of Intelligence

- Linguistic
- Logical-mathematical
- Spatial
- Interpersonal
- And others...

Impact of AI

- Driving force behind a new Industrial Revolution
- Redefining how we live and work
- Rapid pace of research and development
- Transformative changes in society
- Full extent of impact still unfolding

Historical Context

- Early contributions from thinkers like Aristotle and Babbage
- Problem solvers of the 20th century
- Ongoing narrative of AI development
- Concerns emerging alongside benefits
- Calls for more stringent regulatory measures

Focus of This Chapter

- In-depth exploration of AI paradigms
- Emphasis on artificial intelligent agents
- Unifying perspective across AI paradigms
- Consideration of interaction between artificial and human agents
- Historical trajectory and evolution of AI
- Key breakthroughs leading to current prominence