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1 Foundations of Artificial Intelligence

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The content of this page is currently a re-formatted copy from the Deliverable 9.6 PhD Curriculum Report.

This topic presents the foundations, scope, history and methodologies of AI.

1.1 Content/Knowledge

Students should be able to:

- Comprehend and compare the various **definitions of AI**.
- Understand/describe the **history of AI** and the eras into which it can be periodized.
- Properly **position AI within computer science** and analyse its links with other fields of science or philosophy (neuroscience, philosophy of mind, electrical/electronic engineering, mathematics, cognitive science).
- Understand and historically order the most important **propositions in the philosophy of AI** (e.g., Turing test, physical symbol system hypothesis, etc.).
- Comprehend the specific **relationship of AI** with logic, applied maths, game theory and other areas of mathematics.
- Compare and discriminate between different **AI methodological paradigms** (symbolic, computational, etc.).
- Understand/describe the concept of the **intelligent agent**.

1.2 Methodological/Skills

Students should be able to:

- Apply their critical and analytical faculties, in order to argue about the comparative advantages/disadvantages of different methodological paradigms from the rich history of AI.

1 Foundations of Artificial Intelligence

- Clearly argue about similarities and differences between natural/human intelligence and artificial intelligence, given the current level of technological progress and potential near-future advances.

1.3 Transferrable/Application

Students should be able to:

- Work effectively with others in an interdisciplinary and/or international team.
- Clearly and succinctly communicate their ideas to technical and non-technical audiences.