

Training modules for SMEs - Module 1 "Introduction to Artificial Intelligence and High-Performance Computing"

Contribution ID: 1

Type: **not specified**

Introduction to Artificial Intelligence

Thursday, 6 March 2025 11:15 (10 minutes)

- Definition and Scope of AI. Introduction to AI and its goal of simulating human intelligence through machines.
- Data Mining and Big Data. Explanation of data mining and its crucial role in analyzing vast datasets to extract valuable insights.
- Subfields and Techniques of AI. Overview of core AI subfields: machine learning, neural networks, robotics, and their methodologies.
- Historical Evolution and Milestones. Journey of AI from its mythological roots to contemporary breakthroughs like Deep Blue, AlphaGo, and Large Language Models.
- AI Winters. Discussion on the AI Winters and the factors that led to periods of stagnation.
- The Rise of Machine Learning. Focus on machine learning's pivotal role in the revival of AI and foundational advances in neural networks.
- Contemporary AI Applications. Practical uses of AI in natural language processing, computer vision, autonomous vehicles, and more.
- Ethical Considerations and Challenges. Addressing ethics, privacy, and societal impacts associated with the advancement of AI technologies.
- Future of AI with Supercomputing. Exploring how supercomputers enhance AI development, providing the computational power for complex tasks.

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