

# AI AND CRITICAL THINKING

1 DAY

## COURSE SUMMARY

This course provides a comprehensive overview of artificial intelligence (AI), focusing on its fundamentals, applications, and ethical considerations. Students will learn to describe different types of AI and their common applications in everyday life. Key ethical issues such as fairness, accountability, transparency, and bias will be explored through real-world examples. The course emphasizes critical thinking skills, enabling students to evaluate AI claims and differentiate between hype and reality. Students will gain an understanding of how machine learning works, including commonly used algorithms and current AI technologies across various sectors.

## COURSE CONTENT

### INTRODUCTION TO AI

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- Explore the transformative field of AI
- Examine the definition, type and common applications in everyday life
- Delve into the ethical and social implications of AI
- Focus on the principles of fairness, accountability and transparency
- A case study of AI bias illustrating the real-world challenges and the importance of ethical considerations in the development and deployment of AI technologies

### CRITICAL THINKING WITH AI

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- Learn how to develop the ability to critically evaluate claims about AI technology by distinguishing between hype and reality, ensuring informed and reasoned decision making

### MACHINE LEARNING AND ALGORITHMS

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- Delve into the fundamentals of machine learning
- Exploring the process from data collection and preprocessing to model training and evaluation
- Understanding the different types of learning commonly used algorithms such as linear regression, decision trees and neural networks

### ADVANCED ETHICS AND AI SAFETY

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- Explore the complexities of data privacy and AI security
- Looking into the importance of robust protection measures, ethical considerations in handling sensitive information and balancing the benefits of AI with the protection of personal freedoms and privacy

## CASE STUDIES OF AI IMPLEMENTATIONS

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- Look at transformative opportunities and unique challenges AI presents across various industries, emphasizing the importance of balancing innovation with ethical considerations and ensuring responsible implementation to maximize benefits while minimizing risks.

## PHILOSOPHICAL AND FUTURE ASPECTS OF AI

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- Examine the philosophical debates surrounding the possibility of AI achieving consciousness, including arguments for and against strong AI, and looks at the implications of developing Artificial General Intelligence

## AI GUIDELINES AND POLICIES

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- Collaboratively develop a foundational draft of AI guidelines and policies focusing on defining core principles, gathering diverse perspectives, and creating a framework for ethical, responsible, and transparent use of AI technologies

## CRITICAL EVALUATION OF AI SYSTEMS

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- Explore the concepts of AI robustness, reliability, and limitations
- Focus on how to ensure AI systems maintain performance under varied conditions, produce consistent results, and understand their inherent constraints in real-world applications