Introduction to Artificial Intelligence

Online course learning objectives

This course gives learners a full understanding of what artificial intelligence is and how it is used and applied in society and research methods. It explores the ethical issues surrounding artificial intelligence and the uses of machine learning.

This course will help learners to:

- Describe the origins and development of AI
- Evaluate the pervasiveness of AI in our society
- Recognize how AI can be applied to research methods
- Understand the ethical dimensions of AI
- Identify what machine learning is and how it's used
- Compare the different machine learning methods and some of their challenges

Language: English
Time to complete: 2 hours
Level: Beginner
Instructor: Dr. Eleni Papadonikolaki

Online course full syllabus

MODULE ONE: MYTHS AND REALITIES OF ARTIFICIAL INTELLIGENCE

In this module we'll look at the myths and realities of artificial intelligence (AI), what it is and what it isn't. We will delve into historical events that have led to its growth and focus on the applications of AI and how it's become part of many aspects of everyday life. It includes a topic on ChatGPT and how to use it during the research process.

Topics:

1. Defining AI
2. What AI Can Do
3. A Brief History of AI
4. Everyday Applications of AI
5. ChatGPT
6. Using ChatGPT in Your Research Process
7. Checkpoint

MODULE TWO: AI IN RESEARCH METHODS

In this module we will delve deeper into AI and its applications in research, recap typical

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activities that a researcher would carry out and take a closer look at data analytics, and data mining.

Topics:

1. The Relationship between AI and Research
2. Data Mining
3. Checkpoint

MODULE THREE: ETHICAL CHALLENGES IN AI

In this module we'll go through both the optimistic and the dark side of AI. We will begin by defining the ethical issues that surround AI, before looking at specific challenges in employment, distribution of wealth, racial inequalities and data science.

Topics:

1. Ethics and AI
2. Unethical AI: Issues and Concerns
3. Ethical Challenges in Data Science for AI
4. Checkpoint

MODULE FOUR: MACHINE LEARNING

This module will introduce machine learning as a part of AI and discuss different types of ML and their applicability in processing data. Additionally, we will cover the fundamental principles of ML, the three main types of ML, and the ML process.

Topics:

1. What Is Machine Learning?
2. How Does Machine Learning Work?
3. What Are the Machine Learning Methods?
4. How Is Machine Learning Used?
5. What Are the Challenges of Machine Learning?
6. Checkpoint

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