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Upskilling adult educators on key  
emerging digital technologies

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## ARTIFICIAL INTELLIGENCE (AI) MOOC

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Starts July 3rd 2023

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## About the project

With rapidly evolving digital technologies becoming an integral part of economic, social and daily life in Europe, digital competencies should be one of the core skills for all educators and training staff today.

ADA aims to help adult educators and trainers to keep up with the digital transformation through training and capacity building activities on emerging digital technologies, with focus on Artificial Intelligence (AI) and Internet of Things (IoT).

# OBJECTIVES

## The main objectives of the ADA project are:

- **Upskilling adult educators working in the field of digital inclusion** through the provision of high-quality online training on key emerging digital technologies and enhancing their knowledge on AI and IoT to create meaningful learning experiences for adults on these topics
- **Strengthening the capacity of adult education organisations** to get ready in introducing training activities on emerging technologies in their educational offer and increasing their impact in digital transformation
- **Promoting transnational cooperation and exchange** through the nurture of a Community of Practice as the main hub for digital competence stakeholders from all sectors to connect and share

## The ADA project aims to achieve these objectives by offering:

- **Online training:** Massive Open Online Courses (MOOCs) and Open Educational Resources (OERs) on AI and IoT
- **DigComp-based resources:** Tools, methodologies, webinars and best practices
- **Community of Practice (CoP):** A hub for digital competence practitioners and stakeholders to connect and exchange practices

## The ADA AI MOOC at a glance

- **Classes start:**  
3 July 2023
- **Classes end:**  
25 September 2023
- **Estimated effort:**  
2 hours per week for 12 weeks, for a total of 24 hours including an estimated study time
- **Studying method:**  
Courses and materials are entirely self-administered
- **Tutors:** No synchronous sessions but online tutors will be available for questions
- **Level:** Beginner
- **Language:** English

## What's in for you?

### Pre-assessment

Before starting the course, each participant will take self-assessment tests on their current knowledge and attitude with respect to the AI technology.

### Module Completion

At the end of each module, there will be an assessment test leading to a score. The learner will be able to move to the next module regardless of the score.

### Certification

At the end of the course, each participant will take a second round of knowledge and attitude self-assessment tests, and a short survey on their course experience.

Participants will receive a certificate of successful course completion, based on the average of their module scores (i.e. average score equal or above 60%).

### Adult educators and trainers completing the AI MOOC will:

- get equipped with the basic understanding and skills on AI
- gain the necessary knowledge to set up and deliver engaging awareness and learning experiences on AI for adult learners

### Register for the ADA AI MOOC

<https://platform.alldigitalacademy.eu>

**Starts July 3rd 2023**

**NO FEES APPLY**

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## AI MOOC Schedule

Week	Starting Date	Module
1-2	03/07/2023	History of AI
3-4	17/07/2023	Introduction to AI
5-6	31/07/2023	How AI works
7-8	14/08/2023	Hands-on AI
9-10	28/08/2023	Application of AI
11-12	11/09/2023	Ethics and Responsible AI

## AI Competences

### Module 1. History of AI

This module provides a comprehensive and detailed overview of the evolution of AI. It examines the cultural, scientific, and technological factors that have influenced its development. Learners will learn about the origins of AI and its progression from cognitivism to connectionism. They will also discover how scientists have tried to replicate human neural functions in an artificial context. The module covers the period when interest in AI waned and how it was reignited, discussing the challenges and solutions that sparked renewed interest in the field. Upon completion of the module, learners will be able to outline the circumstances that led to the birth of AI, identify key stages in AI evolution, and distinguish crucial events in AI's history.

### Module 2. Introduction to AI

This module offers a comprehensive introduction to AI, covering its definition, explanation, and different types and subfields. Through the module, learners gain an insight into supervised and unsupervised learning techniques used in AI, including regression, classification, and clustering, and how they can be applied to solve various problems. The module will introduce the basic terminology of AI, such as machine learning, natural language processing, and neural networks, to ensure that students have a strong foundation in the field's fundamental concepts. Additionally, the module will give an overview of the significance of AI and its applications in modern society, with a focus on natural language processing and image recognition. By the end of this module, learners will have a solid understanding of AI concepts and terminology, including the difference between supervised and unsupervised learning techniques, and their applications in real-world scenarios. They will also have a thorough understanding of how AI can be used to solve problems, identify patterns, and make predictions.

## AI Competences

### Module 3. How AI works

This module provides an in-depth explanation of various techniques used in AI such as clustering, regression, and classification. These techniques are used to analyze and make predictions based on data. The module also covers artificial neural networks and their architecture, which are used to model complex relationships between inputs and outputs. Students will learn about real-world examples of AI in action and explore the different types of AI systems that exist, such as deep learning networks. By the end of the lesson, students will have a better understanding of how AI works and how it can be used to solve real-world problems by analyzing data, making predictions, and automating decision-making processes.

### Module 4. Hands-on AI

This module provides students with a practical experience in building and training AI models. Using Colab notebooks, students will work through guided exercises to build and train AI models. Colab notebooks are a cloud-based platform that allows users to write and execute code in a web browser. This makes it easy for students to experiment with AI without having to install any software on their own computers. During the exercises, students will learn about best practices for model evaluation and optimization. This includes techniques such as cross-validation and hyperparameter tuning. By the end of the lesson, students will have gained practical experience in building and training AI models.

## AI Competences

### Module 5.

#### Application of AI

This module explores the various ways in which AI can be applied to solve real-world problems. This includes deep learning, natural language processing, and image recognition. Deep learning is a type of AI that uses neural networks to model complex relationships between inputs and outputs. Natural language processing is a field of AI that focuses on enabling computers to understand and generate human language. Image recognition is the ability of AI to identify and classify objects within an image. Learners will gain an insight into real-world examples of AI in different industries and fields, such as healthcare, finance, and transportation. They will explore how AI can be used to improve decision-making and efficiency by automating tasks and analyzing data. By the end of the lesson, learners will have a better understanding of the breadth and depth of AI applications.

### Module 6.

#### Ethics and Responsible AI

This module explores the ethical considerations and potential risks associated with AI. As AI systems become more advanced and integrated into our daily lives, it is important to consider the potential consequences of their actions. This includes issues such as transparency, explainability, and accountability. Trainees will learn about frameworks and guidelines for responsible AI, which provide guidance on how to design AI systems that are ethical and responsible. This includes principles such as fairness, non-discrimination, and privacy. By the end of the module, learners will have a better understanding of the importance of ethics and responsibility in AI.