FACILITATE-AI

GUIDELINES FOR FACILITATING THE LEARNING OF ARTIFICIAL INTELLIGENCE
BY SCHOOL STUDENTS OF GRADES 7-12

Guidelines for facilitating the learning of Artificial Intelligence (AI) by School Students of Grades 7-12

C2 Training course: Verification of training curriculum and developed learning materials

Result 2 – A3
Module Number and Area/Topic: 3.9 Elements of AI Ethics
Module owners: Doukas, UCY

Introduction and Broad Description of the Context and Goal of the area/topic addressed

This workshop builds off prior activities involving research and finding sources to justify an argument. Individually and in small groups, students conduct research using search engines, videos, articles, generative applications and that expose ethical pitfalls in an Artificial Intelligence area of their choice.

Learning objectives and **learning outcomes**

Students will be able to:
● *define* artificial intelligence (AI) in their own words, using technologies they encounter in their daily lives as examples,
● *describe* at least one example of an ethical issue pertaining to AI, along with its impact on society,
● *recognize* that AI systems create profiles to predict what online information people will find interesting, from their public data,
● *identify* the advantages and disadvantages of the decisions people make in response to online information determined by machine learning algorithms.
Students should come into this lesson with prior knowledge and the skills to be able to (according to code.org activity):
● *recognize* credible sources on the internet,
● *summarize* information from digital sources to support an argument,
● *navigate* online resources and cite sources appropriately.

Competences

● Exploring information and digital content
● Interacting through digital technologies
● Collaborating through digital technologies
● Awareness of digital division and exclusion
● Awareness of guidelines for ethical systems
● Protecting privacy
● Respecting safety and well-being

Instruments/Tools/Supporting Material/Resources to be used:

- Paddlet
- Which face is real?
- Teachable Machine
- Animated Drawings
- Ethics Guidelines for Trustworthy Artificial Intelligence
- ChatGPT
- Evaluation of Module 3.9: Elements of AI Ethics
- Anex of Module 3.9 Elements of AI Ethics

PART 1	
Learning Objectives	*Describe* at least one example of an ethical issue pertaining to AI, along with its impact on society
Learning Outcomes	*Summarize* information from digital sources to support an argument
Competences	Exploring information and digital content Awareness of guidelines for ethical systems
Activities	**Warm up:** - Vocabulary: Artificial Intelligence - the ability of machines to learn and problem-solve. - Ethics - guidelines for good behaviour. - Introductory Video: Ethics & AI: Equal Access and Algorithmic Bias - Discussion: What comes to mind when you hear the term artificial intelligence? What are examples of artificial intelligence you've seen either in real life or in fiction, like movies or music or television? Can you think of times when these examples were used for good and/or for bad, even if unintended? Are there things they do we might consider "right" or "wrong"?

PART 2	
Learning Objectives	• *define* artificial intelligence (AI) in their own words, using technologies they encounter in their daily lives as examples, • *describe* at least one example of an ethical issue pertaining to AI, along with its impact on society, • *recognize* that AI systems create profiles to predict what online information people will find interesting, from their public data, • *identify* the advantages and disadvantages of the decisions people make in response to online information determined by machine learning algorithms.
Learning Outcomes	• *recognize* credible sources on the internet, • *summarize* information from digital sources to support an argument, • *navigate* online resources and cite sources appropriately.
Competences	• Exploring information and digital content • Interacting through digital technologies • Collaborating through digital technologies • Awareness of digital division and exclusion • Awareness of guidelines for ethical systems • Protecting privacy • Respecting safety and well-being

Activities	Activities:
	1) Students will build a data profile of themselves based on the types of data trails people frequently leave behind when they are online (for this action you can use "unplugged" approach with papers, or collaborative tool, such as online editors or boards, e.g. Padlet).
	2) Each student participates in one of 5 groups of AI experts. Each of the groups specializes in a particular area of AI ethics. These 5 areas are digitally shared (see Annex). Explain that this document lists research in a different AI ethics area of specialization, along with sample articles and videos students may read and watch.

PART 3	
Learning Objectives	*define* artificial intelligence (AI) in their own words, using technologies they encounter in their daily lives as examples, *identify* the advantages and disadvantages of the decisions people make in response to online information determined by machine learning algorithms.
Learning Outcomes	*Summarize* information from digital sources to support an argument,
Competences	Awareness of digital division and exclusion Awareness of guidelines for ethical systems
Activities	**Conclusions and Evaluation:** 1. How would you describe "AI ethics" to a family member or friend who didn't participate in today's activities? 2. What are guidelines we can use to create ethical machine learning apps? 3. *Can AI systems develop an ethical behaviour in the same way that humans grow to be ethical?* Share examples of an AI code of ethics, such as those by Google Responsibility. ● Were the learning objectives clear/align to you? ● Did you feel motivated throughout the lesson? ● What was your favourite activity or learning experience in this lesson? ● Did the lesson provide opportunities for you to develop new competences? ● What improvements or changes would you suggest for this lesson plan?