



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

Reference Number: 2021-1-CY01-KA220-SCH-000032567

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

Result 2 – A3

Module Number and Area/Topic: Module 4: Practicum – Implementation by Trainees

Module owners: Facilitate-AI Consortium

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

In this Module, consortium members create distinct activities to equip high school teachers with effective tools for AI education. The goal is to engage students, foster real-world relevance, and encourage collaboration in AI learning.

Learning objectives and learning outcomes

The learning objectives and learning outcomes of the module include understanding AI concepts, designing effective activities, addressing teaching challenges, integrating hands-on experience, and promoting ethical considerations.

Competences

By taking this module, participants will gain a range of competencies that will enhance their capabilities as AI educators. These competencies include:

1. **AI Knowledge:** A comprehensive understanding of fundamental AI concepts, algorithms, and applications, empowering them to confidently teach AI topics to high school students.
2. **Pedagogical Skills:** The ability to design and implement engaging and effective teaching activities that cater to the diverse learning styles of students in grades 7 to 12.
3. **Problem-Solving and Critical Thinking:** The capacity to analyze challenges in AI education and devise innovative solutions to ensure successful knowledge transfer and student engagement.
4. **Hands-on Experience:** Practical skills in implementing real-world AI applications and guiding students through interactive activities that involve AI technologies.
5. **Ethical Awareness:** A heightened awareness of the ethical considerations surrounding AI and the capability to guide students in making responsible and ethical decisions when using AI.
6. **Collaboration and Communication:** The capacity to collaborate effectively with peers and educators, fostering a community of AI enthusiasts, and the ability to communicate complex AI concepts in a clear and accessible manner.
7. **Adaptability:** Flexibility in adapting teaching approaches to meet the specific needs of diverse student populations, ensuring an inclusive and engaging learning environment.

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

PowerPoint Presentations

PART A	IPDP - IASA
Learning Objectives	<ol style="list-style-type: none"> 1. Understanding Text-to-Image Generative Models 2. Awareness of Bias in AI Models 3. Ethical Considerations 4. Dataset Import and Model Creation 5. Model Exploration 6. Comparison of AI Models 7. Hands-on Computer Vision 8. Image Quality Review 9. Presentation Skills
Learning Outcomes	<ol style="list-style-type: none"> 1. Knowledge of Generative Models 2. Critical Thinking 3. Ethical Awareness 4. Practical Data Science Skills 5. Decision Tree Understanding 6. Model Comparison 7. Computer Vision Proficiency 8. Image Selection Skills 9. Presentation Skills
Competences	<ol style="list-style-type: none"> 1. AI Understanding 2. Critical Analysis 3. Ethical Awareness 4. Data Handling 5. AI Model Interpretation 6. Analytical Thinking 7. Computer Vision Application 8. Visual Presentation 9. Project Management 10. Presentation Skills
Activities	<p>3 distinct activities are mentioned in the Presentation:</p> <ol style="list-style-type: none"> 1) Pixels from prompts 2) Diabetes Auto-Diagnosis 3) Presentations with 3D assets

PART B	Spiru Haret University & Doukas School
Learning Objectives	<ol style="list-style-type: none"> 1. AI Applications in Biology 2. Effective Communication 3. Impact Assessment 4. AI-Driven Plant Identification 5. Hands-on Experience 6. Biodiversity Awareness 7. Understanding Image Generation 8. Creating AI-Powered Presentations 9. Evaluating Learning Outcomes 10. Data Analysis 11. Feedback and Improvement

Learning Outcomes	<ol style="list-style-type: none"> 1. Knowledge of AI in Biology 2. Video Presentation Skills 3. Critical Thinking 4. Plant Recognition Skills 5. Practical AI Application 6. Environmental Awareness 7. Image Generation Techniques 8. AI Integration in Art 9. Presentation Skills 10. Data Interpretation
Competences	<ol style="list-style-type: none"> 1. AI Awareness 2. Communication Proficiency 3. Analytical Thinking 4. AI Application Skills 5. Problem Solving 6. AI Image Generation 7. Innovation and Experimentation 8. Art and Technology Integration 9. Adaptability
Activities	<p>5 distinct activities are mentioned in the Presentation:</p> <ol style="list-style-type: none"> 1) AI For Biology – AI Video Presentation 2) Plant Recognition with AI Pl@ntNET 3) Image generation in Craiyons 4) PPT generation with app.presentations.ai 5) Kahoot evaluation

PART C	Ivan Apostolov School & CYMS
Learning Objectives	<ol style="list-style-type: none"> 1. Familiarity with AI Tools 2. Tool Analysis 3. Effective Presentation 4. Storytelling with AI 5. Comparison with Human Writing 6. AI Driven Assessment and Objective Evaluation 7. Role playing and Presentation 8. Comparative Analysis 9. Text-to-Image AI applications 10. Historical understanding 11. Crisis scenario creation
Learning Outcomes	<ol style="list-style-type: none"> 1. Tool Comparison 2. Enhanced communication Skills 3. Critical Analysis 4. Objective Assessment 5. Subject understanding 6. Historical Knowledge 7. AI's impact on Art
Competences	<ol style="list-style-type: none"> 1. Analytical thinking 2. Presentation and Communication 3. Critical thinking

	<ol style="list-style-type: none"> 4. Data-driven Learning 5. Crisis management skills 6. Global Diplomacy 7. Collaborative Decision making
Activities	<p>7 distinct activities are mentioned in the Presentation:</p> <ol style="list-style-type: none"> 1) Tool IT 2) Storytelling – AI vs ME 3) ExaminAltion 4) Historical Interviews 5) Tell the Real from the Fake 6) Relive History 7) Model AI-UN

PART D	ITC – UPLOVDIV- DOUKAS
Learning Objectives	<ol style="list-style-type: none"> 1) Understanding AI Applications 2) Machine Learning basic knowledge 3) Environmental Awareness 4) Simplified algorithm understanding 5) Data set management 6) AI Application Awareness
Learning Outcomes	<ol style="list-style-type: none"> 1) AI Problem Solving 2) Image recognition basics 3) Algorithmic intuition 4) Dataset Handling
Competences	<ol style="list-style-type: none"> 1) Problem solving 2) Machine learning techniques 3) Collaborative Learning 4) Algorithmic thinking 5) Data Set Management 6) Problem-Solving with AI
Activities	<p>4 distinct activities are mentioned in the Presentation:</p> <ol style="list-style-type: none"> 1) AI For Oceans 2) Simplified Algorithm for Image Recognition 3) Slice of Machine Learning 4) Teachable Machine: Image-Audio-Pose

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