



2022-2025

# AUGMENTED REALITY FOR EDUCATION: IMPLEMENTATION OF EUROPEAN EXPERIENCE

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101085772 — AR4EDU — ERASMUS-JMO-2022-HEI-TCH-RSCH



**Co-funded by  
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# TABLE CONTENT

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- About Project
- Our Goal
- Project Objectives
- Project Activities
- Project Outcomes
- Meet The Team
- Project Growth
- Our Contacts



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# ABOUT PROJECT

The Jean Monnet Module project "Augmented Reality for Education: implementation of European experience" is being implemented from 2022 to 2025 at the Institute of Computer Science and Information Technologies of Lviv Polytechnic National University, which is Ukraine's largest university by student enrollment, with 33,702 students in 2024 (29,698 full-time and 4,004 part-time). In 2024, Lviv Polytechnic ranked first among Ukrainian universities by the number of applications submitted by entrants for bachelor's and master's programs, held the top position in contract-based enrollments, and was second in state-funded enrollments. It was also among the top three institutions for receiving state educational grants. Moreover, in 2024, the university secured the highest funding in Ukraine for fundamental and applied research, as well as scientific and technological developments, and led in funding received for international projects.



# OUR GOAL

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The main aim of the project Jean Monnet Module «Augmented Reality for Education: implementation of European experience» № 101085772 — AR4EDU — ERASMUS-JMO-2022-HEI-TCH-RSCH is to study European experience in the implementation of digital technologies in the educational process in order to spread these practices in Ukraine, to increase the level of digital competencies of students and teachers, as well as to train IT specialists in creating educational software using AR/VR technologies.



Target groups involved throughout the life of the project include: bachelor's and master's students in Computer Science, Ph.D. students in Information Technology and Artificial Intelligence Systems, specialists and researchers working with AR/VR technologies from other scientific fields (e.g., medicine, marketing, economics), stakeholders from IT companies, and interested members of the general public.

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# PROJECT OBJECTIVES

- studying European standards of digital competence for students and educators (DigCompEdu) and their implementation in Ukraine;
- improving the quality of education and interest in students by more active use of digital technology in the educational process;
- to promote innovation in teaching and research, including the development of open online courses and using blended learning tools;
- to support capacity building of digital skills for Augmented Reality;
- the introduction of digital technology in the educational process so that it is inextricably linked not only with the teaching of certain subjects but also with the learning process;
- to make higher education more accessible to a wide range of students;
- to create links between higher education institutions, research institutions, employers and the general public.



# PROJECT ACTIVITIES

During the project, we implemented the following activities:

- Conducted lectures, seminars, and training sessions for students, using modern teaching methodologies and techniques.
- Organized a summer school for students from various academic backgrounds.
- Provided retraining and professional development for teachers, as well as educational sessions for students on EU-related topics.
- Held roundtable discussions involving all relevant stakeholders.



# PROJECT OUTCOMES

- Development of a new academic courses: "Virtual and Augmented Reality Systems" (for bachelor's students in Computer Science), "Augmented and Virtual Reality Systems in Education" (for master's students in Computer Science) and "Advanced AR/VR technologies for Education" (for PhD students in Computer Science).
- Design and implementation of specialized module: "Digital Technologies for Education" (for bachelor's students in Computer)
- Publication of teaching materials and collective scientific monographs focused on using digital technologies and AR/VR in education.
- Organization of promotional events, including roundtable discussions with stakeholders and a multidisciplinary summer school.
- Presentation of research results at international scientific conferences.
- Conducting a workshop for academic, professional, and civil society audiences on the challenges, tools, and techniques of ethical AI.
- Development and launch of an online course hosted on the virtual Moodle platform.



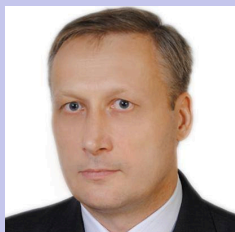
# MEET THE TEAM



## **Anastasiya Doroshenko**

### **Associate Professor**

Associate Professor at the Department of Automated Control Systems, Institute of Computer Science and Information Technology, Lviv Polytechnic National University. She has been working in the field of data mining and artificial intelligence since 2004. In 2007, she obtained a PhD degree in Information Technology. Her academic contributions include the authorship and co-authorship of 7 books and over 40 scientific papers and book chapters, focusing on AI applications, intelligent systems, and data-driven technologies.



## **Vasyl Teslyuk**

### **Full Professor**

Full Professor, Head of the Department of Automated Control Systems, Institute of Computer Science and Information Technology, Lviv Polytechnic National University. The field of scientific interests is VR/AR, Smart Systems, Smart House, Smart City, Computational Intelligence, Robotic Systems. He is author of 5 textbooks, 4 monographs, more than 500 papers in Ukrainian and international Journals, Supervises of doctoral students (PhD level) (12 theses were defended), Editor of the Ukrainian Journal of Information Technology, Member of editorial boards of four scientific journals, 10 patents in Ukraine.

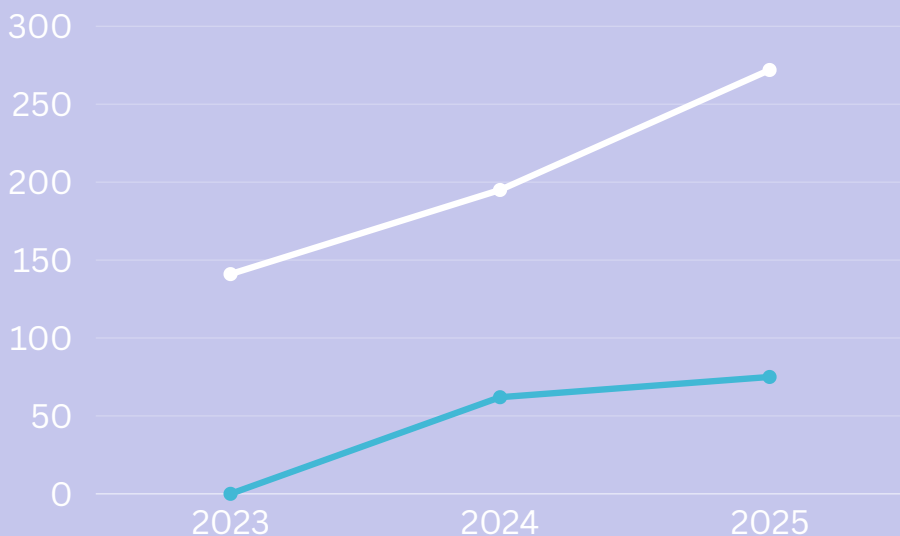


## **Kvitoslava Obelyovska**

### **Associate Professor**

Associate professor at the Lviv Polytechnic National University, Ph.D in Control and measuring technique, responsible executor of the bilateral Ukraine-Austria R&D project „Traffic and telecommunication networks modelling” (2017 – 2019), participant in an academic visit to Kingston University in the context of Erasmus+KA1 agreement (2019). Lecturer of Modules “Network Technology” „ Next Generation Networks” and “Computer Network”. She has an extensive teaching and research experience in both the academic and the professional fields.

# NUMBER OF STUDENTS



During 2022–2025, newly introduced courses incorporated into the official curricula were completed by:

- the discipline “Digital Technologies for Education” and “Virtual and Augmented Reality Systems” (embedded in the bachelor’s Computer Science curriculum) – 605 students;
- the course “Augmented and Virtual Reality Systems in Education” (embedded in the master’s Computer Science curriculum) – 137 students;
- the course “Advanced AR/VR Technologies for Education” (embedded in the PhD Computer Science curriculum) – 34 students.



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