



No. 03 / August 25, 2025

CERTIFICATE OF COMPLETION OF THE PROFESSIONAL TRAINING PROGRAMME

This certifies that

Sergii Sharov,
Candidate of Pedagogical Sciences, Associate Professor

has successfully completed the professional training programme titled:

***“AI and Digital Engineering for Technical Education and Research
(ESPERIDTA)”***

conducted under the auspices of the ESPERIDTA project
(Grant Agreement 101172710 — ESPERIDTA — ERASMUS-JMO-2024-HEI-TCH-RSCH),
funded by the European Commission, and implemented at VIZJA University (Warsaw, Poland)

The training lasted **180 hours**
(80 contact hours and 100 hours of individual work)
(equivalent to **6 ECTS credits**)
between **March 01, 2025**, and **April 30, 2025**.

This certificate is awarded by **VIZJA University (Warsaw, Poland)** under the ESPERIDTA project (Grant Agreement 101172710 — ESPERIDTA — ERASMUS-JMO-2024-HEI-TCH-RSCH), funded by the European Commission.

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PROFESSIONAL TRAINING PROGRAM STRUCTURE

Module	Topic	Hours	Key Content	Individual Work
1	<i>European Frameworks of Digital Transformation</i>	10	EU policies and standards: AI Act (overview), FAIR, GDPR; academic integrity; open data	5
2	<i>Scientific Programming for Engineers</i>	10	Python/Notebooks; environment management; reproducibility; Git	15
3	<i>Data Processing and Visualization</i>	10	Data analytics (pandas/SQL); dashboards (Power BI/Tableau); reporting	10
4	<i>Machine Learning for Applied Engineering Tasks</i>	10	Classification/regression; validation; MLOps (overview); interpretability	15
5	<i>NLP for Technical Terminology and Documentation</i>	10	Corpora, terminology extraction, NER; CAT/NMT; post-editing of technical texts	20
6	<i>Terminology and Ontology Management</i>	10	Termbanks (TBX), SKOS, OntoLex-Lemon; localization; quality assurance of terminology	10
7	<i>Digital Twins and Simulation</i>	10	Basics of simulation (MATLAB/Simulink or Python); data-driven integration	10
8	<i>Pedagogical Design for Engineering Education</i>	10	LMS, online laboratories, competence assessment, EdTech integration	15
TOTAL		80		100

ACHIEVED COMPETENCES

Competence	Description
<i>Data & Code Literacy</i>	Ability to conduct reproducible research, manage datasets, and use version control systems (Git).
<i>Applied Machine Learning</i>	Competence in designing and evaluating ML pipelines for engineering and applied research tasks.
<i>NLP & Terminology</i>	Skills in terminology extraction, termbank creation, technical documentation processing, and CAT/NMT post-editing.
<i>Visualization & Reporting</i>	Ability to design dashboards, visualize data, and prepare analytical reports for decision-making.
<i>Simulation Literacy</i>	Foundational skills in simulation and digital twin technologies for education and research.
<i>Research Data Management & Compliance</i>	Proficiency in FAIR principles, GDPR compliance, copyright, and ethical standards.
<i>EdTech Integration</i>	Ability to design and implement digital tools and platforms in technical and engineering education.
<i>Technical Communication</i>	Proficiency in standardized terminology, localization, and quality assurance of technical texts.