Serhii Dolhopolov

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Research Interests	AI & Machine Learning, Natural Language Processing, Data Science & Big Data, Computational Social Science, Explainable AI & Ethics

Education

Kyiv National University of Construction and Architecture		Sep. 2024 – Present
Ph.D. in Computer Science		Kyiv, Ukraine
Scientific Advisor: Dr. Tetyana Honcharenko		
GPA: 100/100 (State as of May 13, 2025)		
Kyiv National University of Construction and Architecture		Sep. 2022 – Dec. 2023
M.Sc in Cyber Security		Kyiv, Ukraine
Scientific Advisor: Dr. Svitlana Kondakova		
GPA: 97.43/100 – Diploma with honours		
Kyiv National University of Construction and Architecture		Sep. 2018 – Jun. 2022
B.Sc. in Vocational Education (Computer technologies)		Kyiv, Ukraine
Comprehensive State Exam: 100/100		
GPA: 100/100 – Diploma with honours		

Work Experience

Research Department of the Kyiv National University of Construction and Architecture	Mar. 2025 – Present Kyiv, Ukraine
Junior Researcher	
IT Department of the Kyiv National University of Construction and Architecture	Sep. 2023 – Present Kyiv, Ukraine
Assistant Lecturer	
National Agency for Higher Education Quality Assurance	May. 2023 – Present Kyiv, Ukraine
Educational Program Accreditation Expert	

Selected Publications

NeuroPhysNet: A Novel Hybrid Neural Network Model for Enhanced Prediction and Control of Cyber-Physical Systems

LNNS (Lecture Notes in Networks and Systems, vol. 1391) – Book Chapter, Springer

Dolhopolov, S., Honcharenko, T., Chernyshev, D.

YOLOv5-based Object Detection for Construction Site Efficiency: Equipment, Tool, and Vehicle Recognition

ITTAP 2024 – Workshop Proceedings

Dolhopolov, S., Honcharenko, T., Chernyshev, D., Solovei, O.

YOLOv8, YOLOv9, and YOLOv10: A Study in Automated Vehicle Damage Detection

ITTAP 2024 – Workshop Proceedings

Dolhopolov, S., Honcharenko, T., Hots, V., Kruk, P., Porokhovnichenko, I.

Neural Network Threat Detection Systems for Data Breach Protection

SIST 2024 – Conference Proceedings.

Dolhopolov, S., Honcharenko, T., Fedusenko, O., Khrolenko, V., Hots, V., Golenkov, V.

Enhancing Urban Planning with LoRa and GANs: A Project Management Perspective

ITPM 2024 – Workshop Proceedings

Dolhopolov, S., Honcharenko, T., Sachenko, I., Gergi, D.

Strategizing VR Integration in Business and Education: Extending the Technology Acceptance Model through Project Management Perspectives

ITPM 2024 – Workshop Proceedings

Tao, L., **Dolhopolov, S.,** Honcharenko, T.

Multi-Stage Classification of Construction Site Modeling Objects Using Artificial Intelligence Based on BIM Technology

FRUCT 2024 – Conference Proceedings

Dolhopolov, S., Honcharenko, T., Terentyev, O., Savenko, V., Rosynskyi, et al.

Information system of multi-stage analysis of the building of object models on a construction site

ICSF 2023 – Journal Section, IOP Conf. Series: Earth and Environmental Science.

Dolhopolov, S., Honcharenko, T., Terentyev, O., Predun, K., Rosynskyi, A.

Construction Site Modeling Objects Using Artificial Intelligence and BIM Technology: A Multi-Stage Approach

SIST 2023 – Conference Proceedings.

Dolhopolov, S., Honcharenko, T., Savenko, V., Balina, O. Bezklubenko, I., Liashchenko, T.

Integration of Building Information Modeling and Artificial Intelligence Systems to Create a Digital Twin of the Construction Site

CSIT 2022 – Conference Proceedings.

Chernyshev, D., **Dolhopolov, S.,** Honcharenko, T., Haman, H., Ivanova, T., Zinchenko, M.

Digital Object Detection of Construction Site Based on Building Information Modeling and Artificial Intelligence Systems

ITTAP 2022 – Workshop Proceedings

Chernyshev, D., **Dolhopolov, S.,** Honcharenko, T., Sapaiev, V., Delembovskyi, M.

Use of Artificial Intelligence Systems for Determining the Career Guidance of Future University Student

SIST 2022 – Conference Proceedings.

Dolhopolov, S., Honcharenko, T., Dolhopolova, S.A., Riabchun, et al.

Teaching Experience		
Kyiv National University of Construction and Architecture		Spring 2025
CS4775 Artificial intelligence and neural networks		Kyiv, Ukraine
Kyiv National University of Construction and Architecture		Fall 2024, Spring 2025
CS3621 Programming in the Python language		Kyiv, Ukraine
Kyiv National University of Construction and Architecture		Fall 2024
CS4774 Artificial intelligence and hybrid networks		Kyiv, Ukraine
Kyiv National University of Construction and Architecture		Fall 2024
CS4814 Neural networks and artificial intelligence systems in education		Kyiv, Ukraine
Kyiv National University of Construction and Architecture		Spring 2024 & 2025
CS283 Modeling of artificial intelligence tasks		Kyiv, Ukraine
Kyiv National University of Construction and Architecture		Spring 2024
CS492 Artificial Intelligence: Foundations and Frontiers 🚀		Kyiv, Ukraine
Kyiv National University of Construction and Architecture		Fall 2023 & 2024,
CS816 Object-oriented programming		Spring 2024 & 2025,
		Kyiv, Ukraine

Awards	**Verkhovna Rada of Ukraine Scholarship**, Parliament of Ukraine	2021, 2022
	Two-time recipient of a scholarship awarded to outstanding students and young scientists	
	«Zavtra.UA» Scholarship, Victor Pinchuk Foundation	2021, 2023
	Two-time recipient of a scholarship for talented youth with demonstrated leadership potential	
	1st Place, All-Ukrainian Competition of Student Research Papers in «Professional Education»	2021
	1st Place, All-Ukrainian Competition of Student Research Papers in «Educational and Age Psychology»	2020
	3rd Place, All-Ukrainian Competition of Student Research Papers in «Educational and Age Psychology»	2021
	3rd Place, All-Ukrainian Competition of Student Research Papers in «Information Systems and Technologies»	2021
	3rd Place, International Student IT Olympiad «IT-Universe» in «Brand Design and Promotion» competition	2020
	1st Place, Startup Competition «Innovations in Construction and Architecture»	2019
	3rd Place (Team), Educational Hackathon Digital Battle «Battle of the Titans» from European Association EASY	2020
Research Projects	**Methodology for Determining the Tonality and Classification of Multimodal Content in Territorial Revitalization Projects Based on Neural Network Methods**	2025 – 2027, Kyiv, Ukraine
	Funding: UAH 2 929 695 (~ 70 650 USD)	
	Development of AI-driven methodologies for extracting, classifying, and assessing multimodal content within urban revitalization initiatives, leveraging neural network techniques to support data-informed planning and decision-making	
Volunteer Activities	**YES Conference (Yalta European Strategy),** Team Member / Volunteer	2022 – Present
	Organizing-team volunteer for the annual YES forum of 350+ international leaders	
	RECOVERY Rehabilitation Network, Event Participant Volunteer	2024 – Present
	Event volunteer for Ukraine's largest innovative rehab network serving wounded soldiers	
	«General Combat Losses» Analytics Project, Developer & Owner	2022 – Present
	Public analytics portal providing real-time statistics on combat losses, air-alert maps, and frontline action dashboards to inform and safeguard civilian populations	
Skills	**Programming & Tools**	
	Python · C++ · C# · Java · JavaScript · Git · Docker · PyTorch · Tensorflow · Keras	
	Languages	
	Ukrainian (native) · English (fluent) · German (upper elementary)	