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(Eds.)



**5th International Workshop of IT-professionals
on Artificial Intelligence**

ProfIT AI 2025

Liverpool, UK

October, 15-17, 2025

5th International Workshop of IT-professionals on Artificial Intelligence “ProfIT AI 2025”, Liverpool, UK, October, 15-17, 2025

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Preface

It is our pleasure to present you the proceedings of 5th International Workshop of IT-professionals on Artificial Intelligence (ProfIT AI 2025), Liverpool, UK, 15-17 October, 2025.

The workshop was jointly organised by the National Aerospace University “Kharkiv Aviation Institute”, the University of Liverpool, the V.N. Karazin Kharkiv National University.

ProfIT AI 2025 focuses on the practical applications of cutting-edge research and real-world outcomes from international scientists and practitioners in the field of artificial intelligence. The workshop provides a platform for exchanging innovative ideas, sharing theoretical and practical research findings, discussing the current state of the AI industry, and fostering collaboration to accelerate the adoption of research results. We believe that the outcomes of this workshop will make a valuable contribution to the advancement of artificial intelligence.

The workshop was supported by the largest associations of Ukraine: **Ukrainian Scientific IT Society, Kharkiv IT Cluster** and **Coordinating council of the National Academy of Sciences of Ukraine on Artificial Intelligence**.

The workshop is soliciting literature review, survey and research papers including, whilst not limited to, the following areas of interest:

- Computer Vision & Signal Processing;
- Natural Language Processing & Human-AI Interaction;
- Methods & Infrastructure for Intelligent Systems;
- Applied Artificial Intelligence;
- Intelligent Systems in Healthcare.

The language of Workshop ProfIT AI 2025 is English. The Workshop took the form of oral presentations of peer-reviewed regular papers.

Submitted papers were peer-reviewed by two reviewers from at least two countries on the basis of technical quality, relevance, originality, significance, and clarity. The Program Committee used reviews to determine which papers could be accepted for presentation at the workshop. 128 papers were received, 44 papers were accepted (**Acceptance rate is 34%**). All accepted papers were presented during the Workshop.

The workshop would not have been possible without the support of many people. First of all, we would like to thank the program and organization staff, the members of the Technical Program Committees and external reviewers for their excellent and tireless work. We sincerely wish that all attendees benefited scientifically from the workshop and wish them every success in their research. It is the humble wish of the workshop organizers that the professional dialogue among the researchers, scientists and engineers continues beyond the event and that the friendships and collaborations forged will linger and prosper for many years to come.

The International Workshop of IT-professionals on Artificial Intelligence (ProfIT AI) was first held in 2021 at the National Aerospace University "Kharkiv Aviation Institute" in Kharkiv (Ukraine). In 2022, during the planning of the second workshop, on February 24, Russia invaded Ukraine. Kharkiv became a place of bloody battles, and its inhabitants showed courage in fighting against the Russian occupiers. At the National Aerospace University "Kharkiv Aviation Institute", which was the venue for the first workshop, the Russian army carried out more than 200 missile and bomb strikes. This brought destruction to the campus, which continues to recover. The escalation of the Russian war in Ukraine, in addition to massive destruction and loss of life, led to a forced transformation of the academic and

scientific sphere. Despite this, Ukrainian scientists continue their research in the face of war, limited resources, power outages, and heating. Therefore, 2nd International Workshop of IT-professionals on Artificial Intelligence “ProfIT AI 2022” was organized in Lodz University of Technology and its Institute of Information Technology. The 3rd International Workshop of IT-professionals on Artificial Intelligence “ProfIT AI 2023” was organized in University of Waterloo. And the 4th International Workshop of IT-professionals on Artificial Intelligence “ProfIT AI 2024” was organized in the Massachusetts Institute of Technology. We would like to express special thanks to the University of Liverpool, which became the venue for the 5th International Workshop of IT-professionals on Artificial Intelligence “ProfIT AI 2025”. Furthermore, we express special thanks to the Armed Forces of Ukraine and the brave Ukrainian people, who show unimaginable courage in the struggle for freedom and democratic values.

2025

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