

Preface: modern data science technologies doctoral consortium

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Abstract

This document is the preface of the Modern Data Science Technologies Doctoral Consortium (MoDaST 2025), June 15–16, 2025, held in Lviv, Ukraine (<https://ism.lpnu.ua/uk/MoDaST>).

Keywords

Big data analysis, Analytical methods, Data Science, Machine Learning, Image segmentation, NLP

1. Introduction

The main purpose of the Modern Data Science Technologies Doctoral Consortium is providing a forum for researchers to discuss models, methods and information technology for data science, data analysis and business analysis, and their real-life applications. In MoDaST Doctoral Consortium, we encourage the submission of papers on machine learning, deep learning, decision making, and multicriteria decision analysis areas. The MoDaST Doctoral Consortium is soliciting literature review, survey and research papers comments including, whilst not limited to, the following areas of interest:

- Analytical methods;
- Ontological engineering;
- Business analysis of information processes;
- Big data analysis;
- Analytical data warehouses;
- Cloud services;
- Repositories and data spaces;
- Data consolidation technologies;
- Computer linguistics;

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- Machine Learning Applications;
- Recommendation system with collaborative filtering;
- Natural Language Processing;
- Data Visualization;
- Data Acquisition and Wrangling;
- Machine Learning;
- Clustering;
- Neural Networks;
- Classification algorithms;
- Regression algorithms;
- Training (weight optimization) using backpropagation;
- Gradient descent;
- Setting the learning rate of your neural network;
- Deep neural networks;
- Batch normalization;
- Convolutional neural networks;
- Image segmentation;
- Object detection (YOLO, SSD, Faster R-CNN);
- Evaluating object detection models;
- Facial recognition;
- Recurrent neural networks;
- Transformer networks;
- Siamese networks;
- Reinforcement Learning

The language of the Modern Data Science Technologies Doctoral Consortium is English.

The Modern Data Science Technologies Doctoral Consortium took the form of an oral presentation by peer-reviewed individual papers. The papers were distributed among 36 external reviewers from The Netherlands, Finland, Germany, France, United Kingdom, China, Austria, Czech Republic, Portugal, India, Poland and Ukraine. To make more correct decisions regarding the acceptance or rejection the papers got 2-3 reviews.

This year Organizing Committee received 69 submissions, out of which 21 were accepted for presentation as regular papers. These papers and extended abstracts were published in Modern Data Science Technologies Doctoral Consortium (MoDaST 2025) proceedings.

2. Acknowledgements

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Committee of the workshop whose devotion and efficiency made this instance of Modern Data Science Technologies Doctoral Consortium a very interesting and effective scientific forum. We would like to thank Modern Data Science Technologies Doctoral Consortium Chairs, as well as Program Committee and all Reviewers, for their diligence in selecting the papers and ensuring their high scientific quality.

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