Inal Adam Mashukov

Email: Inal.Mashukov001@umb.edu

LinkedIn | Google Scholar | Github | ResearchGate

Education

University of Massachusetts - Boston

- Mathematics, BA
  Recipient of the EKM Scholarship at UMass Boston
- Computer Science, PhD *GPA 3.6*

Publications

- *A Multi-view Feature Construction and Multi-Encoder-Decoder Transformer Architecture for Time Series Classification*. Li, Z., Ding, W., Mashukov, I., et al. (2024). Advances in Knowledge Discovery and Data Mining. PAKDD 2024. Association for Computing Machinery Digital Library. Springer. https://doi.org/10.1007/978-981-97-2266-2_19

- *Optimizing Real-World Physical Activity Recognition: Determining Data Sufficiency and Exploring Model Robustness*. Mashukov, I., Ding, W., et al (2025). IEEE Transactions on Artificial Intelligence. (Under review).

Experience

- **Researcher** *2023 - Present*
  Artificial Intelligence Laboratory,
  Knowledge Discovery and Data Mining Laboratory
  Department of Computer Science
  University of Massachusetts Boston
  Supervisors: Dr. Wei Ding, Dr. Ping Chen

  Performing academic research and developing novel state-of-the-art Deep Learning models. Building models in Python using Pytorch, Tensorflow, and the associated frameworks. Adhering to production level software development practices. Training deep learning models and assessing their performance, tuning the models to produce better results.

- **Applied Researcher** *2024 - Present*
  Massachusetts General Hospital, Harvard Medical School
  Supervisors: Dr. Shiqian Shen (Harvard Medical School, MGH)

  Building deep learning models for video recognition, time series analysis. Performing model training and tuning, particularly in the context of video and sensor data recognition for human and animal activities for medical applications at MGH, Harvard Medical School.

- **Statistician, Graduate Assistant** *2024 - Present*
  Center for Statistical Computing
  University of Massachusetts Boston

Performing statistical analysis for graduate researchers; analyses include regression and problems involving parametric statistics. Lecturing graduate students on mathematical statistics and statistical software, such as R, Python, SPSS, others.

Skills

- **Programming languages and development tools:** Python (including PyTorch, HuggingFace, TensorFlow, XGBoost, others), Java, SQL (Oracle and Microsoft), R, C, C++, Linux, Docker, Git, CI/CD, AWS.

- **Deep Learning AI models and algorithms:** Transformers, Convolutional Neural Networks, Recurrent Neural Networks, Generative Adversarial Networks (GANs), Autoencoders, Diffusion Models, Reinforcement Learning, Deep Q-learning, Large Language Models (LLMs), Representation Learning (Masking, Pretraining, Contrastive Learning).

- **Artificial Intelligence applications**: Time Series Analysis, Computer Vision, Audio Processing, Natural Language Processing, Classification, Regression, Clustering, Representation Learning, Generative and other tasks.

- **Performing deep learning model training and hyperparameter tuning** using Nvidia's CUDA for GPU utilization, implementing various methods of model selection and performance assessment, using pretrained models, and other methods.

- **General**: Database Administration and Design, Computer Security and Networking, Classical Machine Learning models and algorithms, Object-Oriented Software Design and Development, Mathematics and Theoretical Computer Science.

Professional Service

- **Editor, Reviewer** *2024 - Present*

  Association for Computing Machinery, Transactions on Knowledge Discovery from Data,
  Association for Computing Machinery, Transactions on Intelligent Systems and Technology
  Serving as a reviewer of research publications submitted to the Association for Computing Machinery's Journals.

- **Administrator** *2025*

  With Dr. Wei Ding
  Society for Industrial and Applied Mathematics, International Conference on Data Mining SDM

- **Teaching Assistant** *2023 - 2024*

  Department of Engineering
  University of Massachusetts Boston

  Performing data collection for students in experiments that use motion capture technology. Teaching machine learning principles and building deep learning models in Python, including theory and coding.