ALEKSANDR RAZIN

Research interests: visual synthesis, representation learning, explainable and safe AI

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EDUCATION

ITMO University — St Petersburg, Russia
M.S. Big Data and Machine Learning. GPA: 4.9/5 — 2022-2024
"Enhancing Image Super Resolution through Depth Estimation"

Mining University — St Petersburg, Russia
B.S. Applied Physics and Mathematics. GPA: 4.4/5 — 2018-2022
"Real-time obstacle detection and analysis for robotic exploration"

RESEARCH AND INDUSTRY EXPERIENCE

R&D Team Lead — Moscow
Art Intelligence (AI startup) – Machine learning solutions for diverse industries — Feb. 2024 — Aug 2025

- Integrated depth map estimation network into warehouse transport systems, reducing emergency incidents
- Deployed product freshness recognition service with detection and defect segmentation into retail video analytics
- Mentored a team of 5 ML engineers, ensuring successful delivery of machine learning projects

Deep Learning Research Engineer — St Petersburg
Huawei - Computer Vision Media Team, Leading ICT & smart device provider — Dec 2023 — Apr 2025

- Enhanced generative models with spatial priors, reducing visual artifacts and improving scene structure representation
- Elevated object similarity and texture reconstruction in diffusion models through optimized reconstruction loss
- Research and developed methods for video restoration: quantization, architecture and train strategy optimization
- Managed 100+ GPU experiments, resolving ghosting and flickering in flagship Mate-70 night HDR video processing through multi-stage active learning strategy

Lead Machine Learning Engineer — Remote
Confidential FinTech - Financial analytics platform with 3M+ MAU — Sep 2023 — Feb 2025

- Fine-tuned and aligned domain-specific LLMs to enhance analytic depth and tool integration across financial tasks
- Designed and deployed multiple ML products, overseeing end-to-end system architecture and implementation

Deep Learning Research Intern — St Petersburg
Huawei - Cloud BU Team, Leading ICT & smart device provider — May 2023 — Sep 2023

- Investigated techniques to improve image captioning and enhanced visual encoder representation using metric learning
- Trained efficient domain classification and LoRA-DPO adapters for LLMs, improving adaptation and response accuracy
- Explored knowledge distillation strategies for VLMs and LLMs, reducing models complexity with minimal quality loss
- Researched and improved semantic search and RAG methods for LLM assistants, resulting in reduced hallucinations

Deep Learning Engineer — St Petersburg
ITMO University – Applied AI Research Laboratory, national university — Jan 2022 — May 2023

- Developed several computer vision methods for fake stamps detection, banknotes segmentation and clusterization
- Accelerating object detection models through knowledge distillation and reduced error rate with contrastive learning
- Built and managed Airflow ETL pipelines for image processing and delivering for continuous experiments

Research Intern — St Petersburg
Mining University - Robotic Laboratory, national university — Jan 2021 — Dec 2021

- Analyzed autonomous pipeline inspection and defined deep learning objectives for pipeline process optimization
- Collected inspection data and trained defect and obstacle detection models for integration into robotic devices
- Processed 3D LiDAR point cloud and depth map data for pipeline inspection and visualization tasks

ACADEMIC ACTIVITIES & LEADERSHIP

Teaching Assistant — St Petersburg
ITMO University — Sep 2023 — Dec 2023

- Assisted in developing lab assignments and led practical classes for the Image Generation Models module

Teaching Assistant — St Petersburg
Mining University — Sep 2021 — Dec 2021

- Conducted laboratory classes and evaluated experimental results in physics

Mathematics Tutor — St Petersburg
Saint Petersburg State University (SPbU) — Sep 2020 — May 2021

- Conducted classes in Olympiad mathematics and programming

PUBLICATIONS AND PATENTS

- Gorbatovski, A.V., Razin, A.D., Aliev, A.A., Kovalchuk, S.V. (2024). Improving question answering in programming domain with pretrained language model fine tuning using structured diverse online forum data. Journal Scientific and Technical of Information Technologies, Mechanics and Optics, 158(6), 1024. 🔗

- Pshenin, V., Liagova, A., Razin, A., Skorobogatov, A., Komarovsky, M. (2022). Robot crawler for surveying pipelines and metal structures of complex spatial configuration. Infrastructures, 7(6), 75. 🔗

- Pshenin, V., Razin, A., Zakirova G.S. (2022). Program for processing data for the presence of corrosion damage and its detection using a convolutional neural network. Russian Federation Patent RU2022616881. 🔗

- Pshenin, V.V., Razin, A.D., Dzhemilev, E.R. (2022). Program for object detection on raw data using a pre-trained neural network model for classification. Russian Federation Patent RU2022662358. 🔗

- Pshenin, V.V., Razin, A.D., Dzhemilev, E.R. (2022). Database of typical pipeline construction elements collected during robotic device testing and processed with a convolutional neural network. Russian Federation Patent RU2022621490. 🔗

ACHIEVEMENTS

- Kaggle: OTTO – Multi-Objective Recommender System (Bronze medal) 🔗 — Nov 2022 — Feb 2023
- Recipient: Increased state academic scholarship at ITMO, at Mining University — Sep 2018 — Jun 2024
- Grant winner: Russian Student Startup competition — 2023
- Prize winner: Russian National Olympiad in Physics and Mathematics, “Star” — 2018
- Graduated with a Gold Medal and recognized among the top graduates in the region — 2018