MAKSIM ZHDANOV | Curriculum Vitae

maxxxzdn@gmail.com

Research interests

- Group Equivariant Deep Learning
- Generative Modeling
- Molecular Biology & ML
- Physics & ML

Experience

RESEARCH ASSISTANT — 04/2022 - ongoing
Helmholtz AI @ Helmholtz-Zentrum Dresden-Rossendorf

STUDENT ASSISTANT — 09/2020 - 03/2022
Helmholtz AI @ Helmholtz-Zentrum Dresden-Rossendorf

STUDENT ASSISTANT — 05/2020 - 12/2020
The Institute for Medical Informatics and Biometry

Education

TU DRESDEN — 10/2019 - 3/2022
M.Sc. in Computer Science, GPA: 1.4. — Dresden, Germany

SAINT PETERSBURG STATE UNIVERSITY — 9/2015 - 7/2019
B.Sc. in Biophysics, GPA: 1.2, with honours. — Saint Petersburg, Russia

Publications

- **Zhdanov, M.**, Steinmann, S., & Hoffmann, N. (2022). Investigating Brain Connectivity with Graph Neural Networks and GNNExplainer, accepted to ICPR 2022
- **Zhdanov, M.**, Steinmann, S., & Hoffmann, N. (2022). Learning Generative Factors of Neuroimaging Data with Variational auto-encoders, in review for IMLH @ ICML 2022
- Stiller, P., **Zhdanov, M.**, Rustamov, J., Bethke, F., & Hoffmann, N. (2021). Neural Solvers (Version 0.1). Rodare. http://doi.org/10.14278/rodare.1194
- **Zhdanov, M.** (2022). Analyzing Generative Factors ofFunctional Connectivity withVariational Autoencoder, thesis.

Selected projects

- Solving inverse scattering problems with diffusion models (in progress)
- Representation learning for functional connectivity analysis
- Investigating brain connectivity with graph neural networks
- Learning PDE from thermoimaging data with PINNs

Skills

PROGRAMMING LANGUAGE	Python | C++ | R
FRAMEWORKS & TOOLS	Git | GROMACS | AutoDock Vina
LIBRARIES	PyTorch | NumPy | PyTorch Geometric | OpenCV | Pandas
LANGUAGES	**Native:** Russian | **Fluent:** English | **Intermediate:** German

Extracurricular activities

HZDR MACHINE LEARNING JOURNAL CLUB — 09/2020 - ongoing
active participant — Dresden, Germany

HELMHOLTZ AI CONFERENCE — 06/2022
poster presentation — Dresden, Germany

INTERNATIONAL AI ARCHEOLOGY CHALLENGE — 04/2022
3rd place — online, Israel

5. WORKSHOP BIOINFORMATICS MEETS MACHINE LEARNING — 12/2021
Talk: "Investigating Brain Connectivity with Graph Neural Networks and GNNExplainer" — online, Germany

MACHINE LEARNING SUMMER SCHOOL — 08/2021
participant — online, Taiwan

CASUS WORKSHOP — 09/2021
Talk: "Investigating Brain Connectivity with Graph Neural Networks and GNNExplainer" — Gorlitz, Germany

HIDA COVID-DATA CHALLENGE — 04/2021
participant — online, Germany