

Arsenii Ashukha

[Google Scholar](#) / [GitHub](#) / [Twitter](#) / [LinkedIn](#) / London, UK / E-mail: ars.ashuha@gmail.com

I am a Staff Research Scientist at [Isomorphic Labs](#), an Alphabet subsidiary that aims to solve all disease, led by Demis Hassabis and Max Jaderberg. I work on deep learning models for the interaction of drug and protein molecules. Prior to joining Isomorphic, I was a Leading Engineer at Samsung and a PhD student at the [Bayesian Methods Research Group](#) under the supervision of [Dmitry Vetrov](#).

EMPLOYMENT HISTORY

- 2022 - now* **Staff Research Scientist AI, Isomorphic Labs (Alphabet subsidiary)**
Research Scientist (1 year 5 month) → Senior Research Scientist (2 years 3 month) → Staff (present)
A core member of the binding affinity pretraining team. Led the scaling of a model and data.
- 2018 - 2022* **Leading Engineer, Samsung AI Center**
Developed [LaMa](#) (★10k), an image inpainting model achieving up to 50% improvement for large masks, and uncertainty estimation models. I co-led a team focused on applications of generative models.
- 2016 - 2018* **Student Researcher, National Research University Higher School of Economics**
Created sparse variational dropout, a compression method for deep learning models, that led to a 250x compression ratio, 40% improvement.
- Internships & Research visits* 2017 University of Amsterdam Priors for Bayesian deep learning with [Max Welling](#)
2016 Yandex Deep learning based recommendation system for online audio streaming service
2015 Rambler Recommendation system for online news aggregator

EDUCATION

- 2017 - 2022* **PhD in Computer Science, National Research University Higher School of Economics**
Title: Prior Knowledge for Deep Learning ([link](#)). Advisor: Dmitry Vetrov.
Committee: Durk Kingma, Karen Ullrich, Jasper Snoek, Yingzhen Li, Sergey Nikolenko.
- 2015 - 2017* **MSc in Computer Science, Moscow Institute of Physics and Technology with Distinction**
- 2011 - 2015* **BSc in Computer Science, Bauman Moscow State Technical University**

MISCELLANEOUS

- **Program committee:** NeurIPS'21 Outstanding Reviewer Award, ICML'20 top-33% Highest-Scored Reviewers
- **Open source implementations:** [LaMa Image Inpainting](#), [Multi-GPU SimCLRv1](#), [PyTorch Ensembles](#), [Real NVP normalizing flows](#), [Quantile Regression DQN \(Distributional RL\)](#), [Equivariant GNN](#)
- **Technical stack:** deep learning, deep neural networks, machine learning, python, numpy, matplotlib, scikit-learn, pandas, bash, git, linux, jax, pytorch, distributed training, dataflow, beam.
- **Teaching:** Co-author of machine learning textbook in Russian education.yandex.ru/handbook/ml, taught machine learning at top-3 Russian universities and Yandex School of Data Analysis.
- **Thesis co-supervision:** Alexander Lyzhov (Deep Ensembles: Analysis and Approaches to Diversification), Andrei Atanov (Effective Learning of Deep Neural Networks Ensembles, Learning Deep Models with Small Data), Evgenii Nikishin (Stability Improvement and Knowledge Transfer in Deep Reinforcement Learning).
- **Immigration status:** I hold permanent residency in the UK.