Alisa Sheinkman

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Profile

Final year PhD researcher seeking opportunities to advance **probabilistic machine learning** in the age of big data and ever-expanding models. My current research focuses on **Bayesian deep learning** and **scalable inference algorithms** and addresses arising challenges with interpretability, reliability and **uncertainty quantification** in mind.

Education

University of Edinburgh, Edinburgh, UK   2020 - Now (expected 2025)
Ph.D. in Mathematics
The thesis studies efficient inference schemes such as stochastic and black box **variational inference** and the specification of the architecture of neural networks, Bayesian model selection and combination. The research output is a novel class of **Bayesian neural networks** and a corresponding variational inference algorithm which together address the challenge of model choice, and improve the accuracy and calibration.

University of Cambridge, Cambridge, UK   2019 - 2020
MASt in Mathematical Statistics (Merit)
Average mark of 71.0% with essay mark of 87.0%.

National Research University Higher School of Economics, Moscow, Russia   2015 - 2019
Bachelor of Mathematics (First Class Honours)
GPA 9.34 out of 10.

Experience

Researcher, Alan Turing Institute Data Study Group, London, UK   2022
Intensive two-week hackathon which developed and tested deep learning models for predicting the perception of various urban noises. The output is a publication at the Journal of the Acoustical Society of America.
Market analyst, Nielsen IQ, Moscow, Russia   2021
Analyzed Nielsen Retail Measurement Data to identify market trends, providing data-driven insights that informed strategic business decisions.
Research intern, NRU HSE, Moscow, Russia   2018-2019
Developed advances on braid groups and quantum matrix algebras in the international laboratory of representation theory and mathematical physics.

Skills

Technical Skills	Python with Numpy/SciPy, JAX, pandas, scikit-learn, NumPyro, Pytorch; Git and GitHub; LaTeX.
Soft Skills	Critical thinking, emotional intelligence, time management.
Languages	English (C2, full proficiency), Russian (native), French (beginner).

Publications

1. **A.Sheinkman**, S.Wade, *The Architecture and Evaluation of Bayesian Neural Networks*, arXiv preprint, arXiv:2503.11808, 2025.

2. **A.Sheinkman**, S.Wade, *Variational Bayesian Bow tie Neural Networks with Shrinkage*, arXiv preprint, arXiv:2411.11132, 2024.

3. A.Mitchell, E.Brown, R.Deo, Y.Hou, J.Kirton-Wingate, J.Liang, **A.Sheinkman**, C.Soelistyo, H.Sood, K.Xing, A.Wongprommoon, W.Yip, F.Aletta, *Deep learning techniques for noise annoyance detection: Results from an intensive workshop at the Alan Turing Institute*, the Journal of the Acoustical Society of America 153, A262-A262, 2023.

Scholarships and grants

ProbAI Hub Doctoral Prize Fellowship, selected for the final round of interviews, not awarded, 2025.

Dr Laura Wisewell Fund scholarship, £1,000, 2024.

ISBA (International Society for Bayesian Analysis) junior travel award, 400$, 2024.

LMS (London Mathematical Society) early career research grant, £450, 2024.

Talks

CMStatistics (Conference on Computational and Methodological Statistics), London, UK, 2024.

ISBA (International Society for Bayesian Analysis) world meeting, Venice, Italy 2024.

BAYSM (Bayesian Young Statisticians Meeting), Venice, Italy, 2024.

Early Career Researches Day of the Centre for Statistics Annual Conference at the University of Edinburgh, Edinburgh, UK, 2024.

Teaching

King's College London   2022-2025
Fundamentals of Probability, Intro to Dynamical Systems, Probability and Statistics GTA.
Lead tutorials, marked assignments and exams.

The University of Edinburgh   2021-2022
Honours Algebra, Calculus and Applications, Proofs and Problems TA.
Provided example classes and workshops, and marked assignments.

NRU HSE   2024
Calculus TA. Provided students with individual help and feedback, and held exams.

Miscellaneous

OVD-info volunteer (human rights defence and media group);
Sports: boxing (2021 - now), professional figure skating (did 2002-2014).