

Artur Bekasov

Applied Scientist II, Amazon
abksv@amazon.com
<https://abksv.me>
Edinburgh, UK

Education

- 2022 **PhD, Machine Learning**, University of Edinburgh
Thesis: Accurate and Reliable Probabilistic Modeling with High-dimensional Data.
Research on predictive uncertainty/Bayesian methods in deep neural networks and generative modeling with neural normalizing flows.
Advised by Iain Murray.
- 2017 **MSc by Research, Data Science**, University of Edinburgh
Graduated with Distinction (83%).
Thesis: Generative Adversarial Video Representation Learning
Advised by Amos Storkey and Timothy Hospedales.
- 2015 **BSc (Hons), Computer Science**, University of Manchester
First Class degree (83%), 2 prizes for academic achievement.
Final year project on genetic algorithms/evolutionary optimization
Advised by Joshua D. Knowles.

Experience

- Since 2021 **Applied Scientist**, Amazon (Search)
Working on search navigation problems, including information retrieval/ranking, contextual bandits, off-policy learning/evaluation, etc.
- 2021 **Research Intern**, Google Research (Perception)
Research on using neural normalizing flows for generative modeling of human motion capture data.
- 2020 **Applied Science Intern**, Amazon (Search)
Project on matching hierarchical entities in customer search queries.
- 2017 – 2021 **Teaching Assistant**, University of Edinburgh
Assisted in teaching the following courses: *Machine Learning and Pattern Recognition; Probabilistic Modeling and Reasoning; Computer Programming for Speech and Language.*
- 2015 – 2016 **Software Development Engineer**, Amazon (Personalization)
Worked on customer recommendations, which included development and deployment of machine learning models. Left to pursue a PhD.

Before 2015 **Scientific Software Developer**, BSc industrial placement, Science and Technology Facilities Council
Teaching support, The University of Manchester

Publications

Learning Action Embeddings for Off-Policy Evaluation

M. Cief, J. Golebiowski, P. Schmidt, Z. Abedjan, **A. Bekasov**

In submission, 2023. <https://arxiv.org/abs/2305.03954>

Variational Boosted Soft Trees

T. Cinquin, T. Rukat, P. Schmidt, M. Wistuba, **A. Bekasov**

AISTATS, 2023. <https://arxiv.org/abs/2302.10706>

Ordering Dimensions with Nested Dropout Normalizing Flows

A. Bekasov, I. Murray

Workshop on Invertible Neural Networks, Normalizing Flows, and Explicit Likelihood Models, ICML, 2020. *Selected for a spotlight.* <https://arxiv.org/abs/2006.08777>

Neural Spline Flows

C. Durkan*, **A. Bekasov***, I. Murray, G. Papamakarios

* Equal contribution. NeurIPS, 2019. <https://arxiv.org/abs/1906.04032>

Cubic-Spline Flows

C. Durkan*, **A. Bekasov***, I. Murray, G. Papamakarios

* Equal contribution. Workshop on Invertible Neural Networks and Normalizing Flows, ICML, 2019. *Selected for a contributed talk.* <https://arxiv.org/abs/1906.02145>

Bayesian Adversarial Spheres

A. Bekasov, I. Murray

Bayesian Deep Learning Workshop, NeurIPS, 2018. *Selected for a spotlight.* <https://arxiv.org/abs/1811.12335>

Reviewing

Served as a reviewer for NeurIPS, ICLR, and ICML, as well as the following workshops:

- ▶ Invertible Neural Networks, Normalizing Flows, and Explicit Likelihood Models (ICML)
- ▶ Deep Generative Models for Highly Structured Data (ICLR)
- ▶ Structured Probabilistic Inference & Generative Modeling (ICML)

References available upon request.