

Aleksandr (Sasha) Podkopaev

Education

- 2018 – 2023 **PhD in Statistics & Machine Learning**, *Carnegie Mellon University*, GPA: 4.1 / 4.0.
Advisor: Aaditya Ramdas.
Relevant coursework: statistics, machine learning, convex optimization, deep learning, statistical computing.
- 2016 – 2018 **MSc in Applied Mathematics & Computer Science**, *Skolkovo Institute of Science and Technology, Moscow Institute of Physics and Technology (joint program)*, GPA: 5.0 / 5.0.
Relevant coursework: high-dimensional statistics, numerical linear algebra, random matrix theory.
- 2012 – 2016 **BSc in Applied Mathematics & Physics**, *Moscow Institute of Physics and Technology*, GPA: 4.9 / 5.0.












Experience

- Sep 2023 – Now **Walmart Global Tech (AdTech)**, SENIOR DATA SCIENTIST, Sunnyvale, CA.
Working on various applications of statistics and machine learning in advertising technology, e.g., representation learning, information retrieval, forecasting, uncertainty quantification.
- Summer 2022 **AWS (Causality Team)**, RESEARCH INTERN, Santa Clara, CA.
Developed a sequential nonparametric independence test for general observation spaces (images, text, etc.). This test: (a) enables continuous data monitoring while maintaining validity, (b) is provably consistent, (c) demonstrates superior performance compared to existing methods on synthetic and real (MNIST, weather, etc.) data.
- Summer 2020 **Google (Chrome Team)**, DATA SCIENCE INTERN, Pittsburgh, PA (Remote).
Conducted a deep analysis of the experimentation pipeline and identified its sensitivity to heavy-tailed data. Used simulation techniques to generate synthetic data that closely mimicked real observations, which provided insights into the existing flaws. Proposed potential improvements to enhance the reliability of the pipeline.
- Summer 2017 **S7**, INTERN, Moscow, Russia.
Performed a detailed study of supply chain data to identify the corresponding key trends. Utilized predictive modeling to forecast demand for inventory optimization.


Research

- Interests Algorithms and theory for nonparametric statistical inference, assumption-lean predictive uncertainty quantification (conformal prediction, calibration), inference under distribution shifts and online settings.
- Invited speaker ISSI and HSE (sequential two-sample and independence testing), JSM and ICSA (predictive uncertainty quantification under distribution shifts), RBC (testing dataset shifts).


Publications

- (NeurIPS '23) **AP**, A. Ramdas “Sequential predictive two-sample and independence testing”.  
- (ICML '23) **AP**, P. Blöbaum, S. Kasiviswanathan, A. Ramdas “Sequential kernelized independence testing”.   
- (ICLR '22) **AP**, A. Ramdas “Tracking the risk of a deployed model and detecting harmful distribution shifts”.  
- (UAI '21) **AP**, A. Ramdas “Uncertainty quantification for classification under label shift” (longer oral).  
- (NeurIPS '20) C. Gupta*, **AP***, A. Ramdas “Distribution-free binary classification: prediction sets, confidence intervals and calibration” (spotlight; *equal contribution).  

Skills

- Languages Python (preferred), R.
- Tools Sklearn, Pandas, Matplotlib, PyTorch, Tensorflow, PySpark LaTeX, Git/Github.
- Certifications Coursera NLP Specialization .

Service

- Reviewer NeurIPS (top 10% in 2023 ) , ICLR, ICML, JMLR.
- TA Graduate-level classes at CMU + Skoltech (intermediate & advanced statistics, convex optimization).
- Social Department committees (retreat, open house) at CMU.

Awards

- MIPT Increased student scholarship, Abramov fund scholarship.