

# Aleksandr (Sasha) Podkopaev

## Education

- 2018 – 2023 **PhD in Statistics & Machine Learning**, *Carnegie Mellon University*, GPA: 4.1 / 4.0.  
Thesis: "Uncertainty Quantification under Distribution Shifts". Committee: Aaditya Ramdas (advisor), Alessandro Rinaldo, Zachary Chase Lipton, Rina Foygel Barber, Shiva Kasiviswanathan. Link: [🔗](#)  
Relevant coursework: statistics, statistical computing, convex optimization, machine learning, deep learning.
- 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.
- 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.  
Applications statistical analysis and machine learning in advertising technology (forecasting with uncertainty quantification, training language models for production). Interviewed multiple candidates for DS roles.
- 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).  
Analyzed existing experimentation pipeline and identified its sensitivity to heavy-tailed data. Used simulation techniques to generate synthetic data, closely mimicking real observations, and provided insights into the existing flaws. Proposed potential improvements to enhance the reliability of the pipeline.
- Summer 2017 **S7**, INTERN, Moscow, Russia.  
Demand forecasting for supply chain and 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 Sequential two-sample and independence testing (ISSI and HSE; link: [📺](#)), predictive uncertainty quantification under distribution shifts (JSM and ICSA), testing dataset shifts (Royal Bank of Canada).

## Publications [📄](#)

- ICML '24 **AP**, D. Xu, K.C. Lee "Adaptive conformal inference by betting". [📄](#)
- 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.