ANASTASIA KIREEVA

CONTACT

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⦿ github.com/aabkn

EDUCATION

EIDGENÖSSISCHE TECHNISCHE HOCHSCHULE (ETH) ZÜRICH — DOCTORATE STUDIES — 05/2022-PRESENT

Advisors: Prof. Afonso Bandeira, Institute for Operations Research, and Prof. David Steurer, Theoretical Computer Science

Research interests: computational complexity, high-dimensional statistics, statistical physics, optimization

TECHNICAL UNIVERSITY OF MUNICH — MASTER'S DEGREE — 2019-2021

Mathematics in Data Science, GPA 1.1/1

Master's thesis: Phase Retrieval with Demixing

The problem of phase retrieval with demixing concerns the recovery of complex signals from superpositions of the squared absolute values of linear measurements. We provide the conditions under which the problem can be solved using different methods. Our analysis includes convex and non-convex optimization techniques.

LOMONOSOV MOSCOW STATE UNIVERSITY — BACHELOR'S DEGREE — 2014-2018

Applied Mathematics and Computer Science, GPA 5.0/5

Bachelor's thesis: Queueing systems with group serving research

We consider the system in which the customers arrive one at a time but are served in a group, and the service time does not depend on the group size. After the customer arrives, the server waits a short time, provided the number of collected requests does not exceed the maximum capacity of the server.

EXPERIENCE

TUM — GRADUATE RESEARCH ASSISTANT — 12/2021-03/2022

Chair Applied and Numerical Analysis and Optimization and Data Analysis

We provide theoretical guarantees of non-convex optimization methods (Wirtinger Flow Algorithm) for phase retrieval with demixing. Joint work with Felix Krahmer and Oleh Melnyk. Being prepared for publication.

TUM DATA INNOVATION LAB — 04/2020-08/2020

Wellabe GmbH & Institute for Biological and Medical Imaging, Helmholtz Zentrum

Defining Corporate Health Classes

Performed a cluster analysis of health data of females to find health classes and conducted a medical interpretation of the resulting clusters.

ERNST & YOUNG — INTERN — 11/2018-02/2019

Financial Services Risk Management

Developed a model for predicting credit scores of contractors based on the financial accounting. Performed SAS and python code audit

AWARDS AND SCHOLARSHIPS

Linde/Munich Data Science Institute Master Scholarship — 04/2021-11/2021

EXTRACURRICULAR PROJECTS

‣ Migraine Tracker Bot — 08/2020-present

Developing and maintaining a Telegram bot for tracking headaches and migraines attacks in an intuitive and minimalistic manner. Link: t.me/MigraineTrackerBot; source: github.com/aabkn/MigraineTrackerBot

‣ Article "Gaussian Mixture Models Visually Explained" — 01/2020
  Link: medium.com/swlh/gaussian-mixture-models-visually-explained-f54f761d304f

‣ Volunteer tutor of olympiad mathematics at the Faculty of Mechanics and Mathematics (Moscow State University) — 2016-2017

LANGUAGES

Russian: native

English: advanced

German: intermediate (B1)

PROGRAMMING LANGUAGES

‣ Python: NumPy, Matplotlib, pandas, scikit-learn, seaborn, plotly, PyTorch

‣ C++, C

‣ MATLAB

‣ SQL

‣ R