Anastasiia Kazovskaia

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Research interests

- Time Series, Mathematical Statistics
- Machine Learning, Deep Learning
- Bioinformatics

Education

St Petersburg Governor's Physics and Mathematics Lyceum No. 30 St Petersburg, Russia
Computer graphics support group *2016 – 2018*

St Petersburg State University, Bachelor's degree St Petersburg, Russia
Faculty of Mathematics and Computer Science, Data Science *2018 – 2022*

Bioinformatics Institute, one-year program St Petersburg, Russia
Program «Algorithmic Bioinformatics» *2022 – 2023*

St Petersburg State University, MPhil degree St Petersburg, Russia
Faculty of Mathematics and Computer Science, SDDS *2022 – 2024*

Hong Kong University of Science and Technology, PhD degree Hong Kong SAR
Department of Mathematics *2023 – current*

Research activities

- Winning the research competition:

  «Multidimensional analogues of Poisson service systems»: *a generalisation of the Poisson service system model for the case of «multidimensional» time is presented and the characteristics of the obtained generalised model are calculated*

- Bachelor's graduation research (Supervisor: Mikhail Lifshits):

  «Multidimensional stable telecom process and related limit theorem»: *a generalisation of the stable telecom process and the associated limit theorem for the case of «multidimensional time» is presented*

- MPhil graduation research project at Biomolecular NMR Laboratory (St Petersburg State University) (Supervisor: Nikolai Skrynnikov):

  Prediction of protein-protein binding affinity: *transfer learning approach with GNN and ESM embeddings for dissociation constant prediction*

Software activities

- XXVI Russian scientific conference of students «Intellectual revival»:

  «Design and implementation of a system for visualizing three-dimensional scenes in real time»

- Android application:

  «Vectorization of raster images of elementary shapes»

- Software project:

  «CBS Basics and enhancements. Conflict-Based Search Algorithms for Multi-Agent Pathfinding problem»

Achievements

- School:
  - Certificate of distinction graduation: GPA is 5.0 / 5.0
- Bachelor's degree:
  - «Yandex» scholarship for the entire period of study
  - Diploma with distinction: GPA is 4.75 / 5.0
- Bioinformatics Institute:
  - Diploma: GPA is 5.0 / 5.0
  - Certificate for the best academic results among all students
- Master's degree:
  - «VKontakte» scholarship
  - Diploma with distinction: GPA is 3.9 / 4.0
- PhD:
  - Hong Kong PhD Fellowship Scheme awardee
  - 2023-2024 MATH Best Teaching Assistant

Employment

- Tutor:
  - For high school students (2019 – 2023): *Mathematics, Physics, Computer Science, Programming*
  - For UG students (2021 – 2023): *Mathematics, Computer Science, Programming*
  - For graduates (2021 – 2023): *English*
- JetBrains Academy (2020 – 2021): *Author of educational articles, tasks, and projects on Mathematics*
- Teaching Assistant:
  - MATH4425 Introductory Time Series: *Spring 2023-24, Spring 2024-25*
  - MATH4423 Nonparametric Statistics: *Fall 2024-25*

Skills

- **Languages:** Russian (native), English (C1)
- **Software:**
  - Python, R, C/C++, Kotlin
  - PostgreSQL, SAS
  - git, bash
  - LaTeX
  - HTML, CSS, JavaScript
  - OpenGL, GLSL

- **Subjects:**
  - Time Series, Mathematical Statistics, Stochastic Processes, Probability Theory
  - Machine Learning, Deep Learning, Smart Video Systems, Natural Language Processing
  - Computer Science, Heuristic Search
  - Bioinformatics
  - Computer Algebra, Computational Geometry
  - Web-technologies

Publications

- PCANN Program for Structure-Based Prediction of Protein–Protein Binding Affinity: Comparison With Other Neural-Network Predictors: *a new structure-based affinity predictor for protein–protein complexes*