

Anastasija Tortevska

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EDUCATION

2025 – PRESENT **ETH Zürich** – *Zürich, Switzerland*

MSc, Computer Science – SPECIALIZATION: THEORY

Relevant Courses: Advanced Algorithms, Structural Graph Theory, Information Security Lab

2020 – 2024 **Columbia University** – *New York, NY*

BA, Computer Science Major & Math Concentration – GPA: 3.74

Relevant Courses: Databases, Artificial Intelligence, Natural Language Processing, Analysis of Algorithms, Computational Complexity, Parallel Functional Programming, Engineering Software as a Service, Game Design.

EXPERIENCE

Tumo - Software Engineer

NEW YORK, NY MAY 2023 – AUG 2023, MAY 2024 – FEB 2025

- Containerized a previously monolithic internal API using Docker and improved the deployment workflow, reducing environment inconsistencies and simplifying development.
- Developed backend features using Java, Spring Boot, and MySQL, implementing clean service layers, DTO mappings, and repository logic to improve maintainability.
- Built a secure authentication and authorization flow with Spring Security, including password hashing, role-based access control, and session management.
- Implemented multi-factor authentication with AWS services and added SMS verification via Twilio, strengthening overall account security.
- Designed and developed a modern React landing page focused on responsive layout and accessibility, leading to higher user interaction.
- Added structured logging, health checks, and monitoring hooks to improve debugging workflows and system observability.

Columbia University - Teaching Assistant

NEW YORK, NY JAN 2022 – MAY 2024

- Assisted in teaching COMS W3203 Discrete Mathematics and COMS W3261 Computer Science Theory, supporting classes of 300 students.
- Held weekly office hours, providing guidance on proofs, algorithms, combinatorics, complexity theory, and structured problem-solving.
- Led recitation sessions with interactive problem-solving, step-by-step walkthroughs, and targeted review material to reinforce key concepts.
- Evaluated assignments, quizzes, and exams with detailed feedback to help improve student performance and clarity of reasoning.
- Created supplemental study materials, including proof templates, practice problems, and review guides for midterms and finals.

Of All Trades - Software Engineering Intern

NEW YORK, NY MAY 2022 – AUG 2022

- Improved platform performance by redesigning database schemas, adding advanced indexing, and optimizing SQL queries, significantly reducing backend load.
- Enhanced user personalization by building visual components for displaying cryptocurrency analytics and improving profile customization.
- Implemented a dynamic asset distribution visualization, integrating optimized queries with interactive real-time chart rendering.
- Improved backend data flows and reduced latency by refactoring inefficient API endpoints and eliminating legacy bottlenecks.

Opal Wearables - Software Engineering Intern

NEW YORK, NY JAN 2022 – MAY 2022

- Designed modular React Native components and implemented UI screens based on Figma prototypes for cross-platform behavior.
- Redesigning core navigation flows and information architecture, reducing user friction and improving clarity within onboarding.
- Integrated social login providers into the onboarding flow, streamlining account creation and improving user conversion.
- Optimized rendering logic and reduced redundant state updates to improve mobile performance and shorten load times.

OLYMPIADS

International Mathematics Olympiad 2019, Balkan Math Olympiad 2019, European Girls Math Olympiad 2018-20 (Bronze, 2xHM), Asian-Pacific Math Olympiad 2018 (HM), Mediterranean Math Olympiad 2018-19 (Bronze), European Math Cup 2017-18 (Gold, Bronze) Macedonian Math Olympiad 2017-19 (2xSilver, Bronze)

PROJECTS

Way2Play - Platform that facilitates the process of finding accessible courts, playing fields, and relevant sport communities in NYC. Uses Google Maps API to provide real time geographic information of local courts. (Ruby on Rails, Heroku)

GapMinder - ML Random Forest model that predicts the Gini coefficient (a measure of income inequality) of a country based on its economic indicators like population, geographic location, GDP, GNI, tax percentages, imports/exports, inflation. (Python, scikit-learn)

SKILLS

LANGUAGES Python, Java, C, HTML, CSS, JavaScript, Bash, LaTeX

TOOLS Figma, SpringBoot, React, React Native, MySQL, AWS, Docker, Flask, Django, Git, Vim, Linux