

Work experience

- **Software Engineer** at **ETH Zürich** (Zurich, Switzerland: 10/2023-present)
- **Software Engineer** at **Google** (Remote, Germany: 11/2021-10/2020)
 - Migrated smart card authentication stack from Ash Chrome to Lacros Chrome.
 - Analyzed network traffic with mitmproxy to understand undocumented APIs of certain third-party apps.
 - Implemented Python scripts to reproduce the aforementioned API behavior.
- **Software Engineer** at **think-cell** (Berlin, Germany: 10/2020-09/2021)
 - Introduced new features and fixed bugs in the color scheme picker dialog.
 - Prototyped in **Python** and implemented a new color distance function in **C++**.
 - Refactored code related to the color scheme picker dialog and HSL/RGB color space conversion.
- **Software Engineering Intern** at **Yandex** (Moscow, Russia: 06/2019-09/2019)
Introduced new features for Yandex's kubernetes analogue and provided general support for it in **C++**.
- **Software Engineering Intern** at **Google** (Zurich, Switzerland: 07/2018-10/2018)
Sampled data in the knowledge graph with **SQL queries** and implemented **Tensorflow** classifier in **Python** to detect mostly online business chains.
- **Software Engineering Intern** at **Yandex** (Moscow, Russia: 07/2017-10/2017)
Implemented NaN features support and fixed bugs for the **CatBoost** machine learning library in **C++**.
- **Teaching Assistant** at **MIPT** (Moscow, Russia: 01/2018-07/2020)
Prepared lessons, notes, and homework exercises on Algorithms and Formal Language Theory courses.
- **Problemsetter** and **tester** at **Hackerrank** and **Topcoder** (09/2014-07/2020)
Developed and provided quality assurance for nearly 100 competitive programming challenges in **C++** and **Python** for use in programming competitions and job interviews.

Projects and code examples

- Main organizer of the [Osijek competitive programming camp](#), hosting 13 teams onsite, and 74 teams overall;
- [adabot.h](#) and [newpages](#): C++ framework for Wikipedia bots and topic-based recent-pages bot;
- Core maintainer of [CP-Algorithms](#): review pull requests, contribute new articles, enhance the website in general;
- [Fast polynomial algebra library](#) in C++, and detailed [cp-algorithms article](#) about it;
- Writing technical articles for Russian and English Wikipedias (e.g. [suffix automaton](#) in enwiki);
- Writing articles on algorithms and mathematics in my [Codeforces blog](#) (nearly 100 entries so far).

Skills and expertise

- **C++**: 11 years of competitive programming experience and 3 years of work experience;
- **Python**: 2 years of experience, including work with **NumPy**, **Pandas**, **Matplotlib**, **Tensorflow**, **Web3.py**;
- Strong **algorithmic** and **mathematical** background;
- Passion for **linear algebra** and **computational geometry**, familiarity with **quaternions**;
- **C#** and **Lua**: worked on several Wikimedia tools and modules written in these languages;
- Working experience with **SQL**, **Git**, **Subversion**, **Linux**;
- Agility- and coordination-based sports: **juggling**, **rollerblading**, **unicycling** ☺.

Competitive programming achievements

- [332/3860 place](#) at **Google Code Jam 2021 Round 2**;
- 1st prize (1/72 place) at **KPI Open 2019**;
- 1st degree award (14/179 place) at **ICPC NEERC 2016**;
- Participant of the Ukrainian **team selection camp** for the **International Olympiads in Informatics 2014**.
- Codeforces [grandmaster](#) (max. rating **2472**, top-700 active participants globally).