

# Danil Mozzhevilov

+7 (996) 327-13-47 | [dmozze@ya.ru](mailto:dmozze@ya.ru) | [github.com/dmozze](https://github.com/dmozze) | [t.me/dmozze](https://t.me/dmozze)

## EDUCATION

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### ITMO University

*Bachelor of Science in Applied mathematics and Computer science*

Saint Petersburg, Russia

2020 - 2024

## EXPERIENCE

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### SWE Intern Kotlin / Java

*D / Dispenser*

March 2023 – June 2023

*Saint-Petersburg, Russia*

- Designed and implemented various controllers, services, DAOs, and DTOs
- Extended a self-written either-monad to incorporate new application logic.
- Significantly refactored and modernized legacy code to improve maintainability and adhere to best practices.

### SWE Intern C++

*Yandex Browser*

Feb 2022 – June 2022

*Saint-Petersburg, Russia*

- Redesigned the password form generator into an abstract factory. It's polymorphic login, mail, password e.t.c.
- Supported/merged migration from 99<sup>th</sup> to 100<sup>th</sup> Chromium core
- Reworked legacy code in extension bar, increase test coverage of it from 40% to 75%

## PROJECTS

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### Concurrent Web-Crawler | *Pure Java (Collections / Concurrency)*

[GitHub: Sources](#)

- Developed Web-Crawler, which makes map from initial pages to every page, which reachable from them
- Implemented with Breadth-First Search with concurrency on each layer
- With "Only allowed-host" modification, which prevents transitions to unplanned sites

### Back-end for "CheckFridge app" | *Laravel, Docker-compose, Redis, Postgres, Nginx*

[GitHub: Sources](#)

- Application that helps to find out what's in the fridge (useful for cohabitants)
- Postgres as main database, Redis as Cache, Nginx as web-server, Laravel as framework
- Containerized by Docker and packed into docker-compose to deploy by one command

### Full-Stack Web-app like Twitter | *Kotlin, ktor, SQLite, JS/HTML/CSS*

[GitHub: Sources](#)

- Developed a RESTful Full-stack web app which has same function as Twitter.com {send / view tweets}
- Database SQLite was used for debug, but it can be easily swap on production one
- Was deployed on AWS

### BigInt implementation | *C++, gtest, CMake*

[GitHub: Sources](#)

- Developed a signed BigInt with  $2^{32}$ -based numeral system using Two's complement method
- Designed all basic operations from increment to bitwise operations
- Implemented Karatsuba algorithm for fast multiplication in  $O(n^{\log_2 3})$
- Optimized with Copy-on-Write and Small Object | 100% code lines covered by tests

## TECHNICAL SKILLS

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**Languages:** Kotlin, Java, C++, SQL, Python

**Technologies:** Spring WebFlux, R2DBC, Spring MVC, JDBC, git, bash, Junit5

**Knowledge:** Algorithms, Data Structures, Concurrent Computing, Distributed computing

## TEACHING EXPERIENCE

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### Competitive programming teacher

*Yugorsky physics and mathematics lyceum*

Jan 2022 – Present

*Khanty-Mansiysk, Russia*