

Aleksei Lapin

✉ a.lapin03@gmail.com | ☎ +7 (921) 777-06-08 | 🌐 github.com/AaLexUser

Saint-Petersburg, Russia

I am a 3rd year student at ITMO University, studying for a bachelor's degree in System and Applied Software. I am passionate about low-level programming, operating systems as well as web development and machine learning.

EDUCATION

- **ITMO University** Saint-Petersburg, Russia
Bachelor of System and Applied Software Sep 2021 – July 2025

PROJECTS

- **Function approximation program** Apr – May 2023
C++, SFML
 - The program finds a function that is the best approximation of a given tabular function using the least squares method.
 - Achieved interactive graph interaction (moving, zooming, adding graphs per window) by writing an **SFML-based** library.
- **Sepia filter in C and Assembler** January 2023
C, x86_64asm
 - Achieved 10 times faster assembly language program execution than C Implementation by using **SSE processor vector instructions**.
 - Implemented library for working with **BMP** files of pictures.
- **Point Application** Dec – Feb 2023
Java, TypeScript, React, Redux, Spring Boot, Oracle
 - Web application designed to create and manage points on the chart, as well as view points of other users of the site.
 - Developed a **RESTful API**, using **Spring Boot** architecture to handle requests and responses.
 - Implemented **JWT token-based** authentication using **Spring Security**.
 - Used **Spring Data** to interact with **Oracle DBMS** by mapping Java objects to tables.
- **Route Manager** Feb – Oct 2022
Java Core, Stream API, Reflection API, PostgreSQL, SLF4J
 - Client-server application designed to store user routes.
 - Realized data exchange between client and server via **TCP** protocol.
 - Implemented **multithreading** reading requests, processing and sending responses on the server.
 - Developed my own library for automatic dependency injection using **DI (Dependency injection)** using **Java Reflection API**.
 - Used **PostgreSQL database** to store data.
 - Implemented event logging using the **slf4j** library.
 - Realized password hashing with the **SHA-256** algorithm.
 - Used **Java Collections** for efficient data storage.
 - Used **Java's Stream API** and lambda expressions to process data efficiently.

AWARDS

- **First Russia Robotics Championship** Krasnoyarsk, Russia
Think Award Winner as part of the KTM team. February 2020

PROGRAMMING SKILLS

- **Programming Languages:** C, C++, x86_64asm, Java, Python, SQL (PostgreSQL), JavaScript, HTML/CSS
- **Frameworks:** Spring Boot, Spring, Spring Data, Spring Security
- **Libraries:** React, Pandas, NumPy, Matplotlib, SFML
- **Developer Tools:** Git, GitHub Actions, Gradle, Maven, CLion, PyCharm, IntelliJ, Webstorm, Jupyter Notebook, GoogleCollab
- **Operating Systems:** Linux, UNIX, Windows

ADDITIONAL INFORMATION

- **Languages:** English – B1