

# DENIS SHABANOV

Bremen, Germany

✉ [shadenis2015@gmail.com](mailto:shadenis2015@gmail.com)    ↗ [@mmel0n](https://twitter.com/mmel0n)    🔗 [github.com/dodolfin](https://github.com/dodolfin)

## Education

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### Saint Petersburg State University

*Bachelor of Computer Science in Applied Mathematics and Computer Science*

**2021 — June 2022**

*Saint Petersburg, Russia*

### Jacobs University

*Bachelor of Computer Science*

**September 2022 — Expected 2024**

*Bremen, Germany*

## Skills

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

**Developer Tools:** IntelliJ IDEA, Git

**Technologies:** Linux

**Skills:** Algorithms & Data Structures

## Projects

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### Visualization Tool | *Kotlin, Apache Batik, Clikt*

**October 2021**

- A tool that renders SVG charts using data from external CSV file.
- I used Apache Batik library to work with SVGs as with `java.awt.Graphics` instances.

### Key-Word Database | *Kotlin, kotlinx-serialization, Clikt*

**October 2021**

- A dbm-inspired key-word database management tool.
- Used `kotlinx-serialization` to read and write from JSON file.
- `Clikt` was used to design command-line interface.

### Diff Tool | *Kotlin*

**September 2021**

- A simplified clone of an UNIX diff utility.
- Uses naive  $O(n^2)$  longest common subsequence finding algorithm.
- Is able to produce output in normal (Linux-like) and unified (GitHub-like) modes.

### C, C++ Homework | *C, C++*

**Since November 2021**

- Unfortunately, it's forbidden by the rules of the course to make homework solutions publicly accessible in the Internet. I may add you as a collaborator on the e-mail. [.zip repo](#) (in Russian)
- C homeworks: Makefile, implementation of some functions from `cstring`, mergesort implementation, intrusive list implementation. C++ homeworks: vector implementation, shared\_ptr, C++ I/O, vector implementation.
- Most complex assignment in C: console utility that crops a rectangular segment of a BMP image and rotates it 90 degrees.
- Most complex assignment in C++: console utility that implements Huffman encoding and allows to compress all types of files.

## Achievements

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### Participation in Russian Competitive Programming Contests

**2019 – Spring 2021**

- **High School Student Olympiad in Informatics and Programming (2021):** 43rd place out of 378 participants
- **All-Siberian Olympiad in Informatics (2020):** 77th place out of 540 participants
- **Saint Petersburg State University Olympiad in Informatics (2020):** 17th place out of more than 300 participants