# DENIS SHABANOV

#### Saint Petersburg

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### Education

#### Saint Petersburg State University

2021 — Expected 2025

Bachelor of Computer Science in Applied Mathematics and Computer Science

Saint Petersburg, Russia

## Skills

Languages: C++, Kotlin, Python Developer Tools: IntelliJ IDEA, Git

Technologies: Linux

Skills: Algorithms & Data Structures

## **Projects**

#### 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

#### 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