

# Malov Timofey

COMPUTER SCIENCE STUDENT

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## Summary

Current second year student of Mathematical and Computer Science faculty of Saint-Petersburg University. Computer Science enthusiast, who either code and solve complex mathematical problems. Main programming languages are Kotlin and C++, but i am constantly learning new ones. Really enjoy functional paradigm and theoretical informatics.

## Skills

**Programming Languages** Kotlin, C++, C, Python(basic knowledge), Haskell, Postgres, Coq(basic knowledge)  
Russian, English

## Attended Courses and Projects

### C++ programming language semester course

Russia

SPBU

- Two main homeworks: bmp-extractor and huffman archiver: [https://gitlab.com/Mell0r/cpp\\_course\\_labs](https://gitlab.com/Mell0r/cpp_course_labs)

### Kotlin programming language year course

Russia

SPBU

- Diff graphic utility: <https://github.com/Mell0r/Graphic-Diff>
- Basic key-value data base: <https://github.com/Mell0r/Basic-KVDB>
- Simple plugin support music player: <https://github.com/Mell0r/Plugin-support>
- Wikipedia parallel statistics calculation: <https://github.com/Mell0r/Wikipedia-Statistics>
- Graphic utility for getting commits info for github repository: <https://github.com/Mell0r/GitHub-Repository-Statistics>

### Theoretical Informatics semester course

Russia

SPBU

- Regular languages, finite automats, Turing machine
- Formal grammars and syntax analysis algorithms
- Basics of complex theory
- Simple calculation language implemented with ANTLR library: <https://github.com/Mell0r/SimpleCalculator>
- DFA, NFA simulator, minimizer and converter: [https://github.com/Mell0r/DFA\\_NFA\\_Simulator](https://github.com/Mell0r/DFA_NFA_Simulator)

### Computer architecture semester course

Russia

SPBU

- Simple CPU-Cache-Memory simulation model in Verilog with completion time calculation: <https://github.com/Mell0r/Simple-CPU-cache-memory-model>
- Parallel image thresholding otsu algorithm: <https://github.com/Mell0r/Parallel-otsu-algorithm>

### Mathematical disciplines

Russia

SPBU

- Calculus
- Algebra
- Probability theory
- Discrete mathematics
- Mathematical logic

### Algorithms and data structures year-and-half course

Russia

SPBU

- Graph algorithms(dfs, bfs, Dijkstra, articulation points search, ...)
- String algorithms(KMP, Z-function, suffix tree, ...)
- Data structures(linked list, segment tree, ...)
- Fast Fourier transform

### Functional programming and Haskell semester course

Russia

SPBU

- Theoretical functional computation model
- Simple type theory
- All programming on this course was on Haskell on "Stepik" learning platform: we used lists, monads, folds, parsers and much more.

## Individual projects

Russia

SPBU

- Command project: sport management system - graphic utility for sport competitions management: <https://github.com/Mell0r/sport-management-system-blackmagik>
- Discord bot for our Mathematical and Computer Science faculty - it is simple and handy helper for easy faculty server management: [https://github.com/spbu-math-cs/MCS\\_discord\\_bot](https://github.com/spbu-math-cs/MCS_discord_bot)

## Honors & Awards

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### DOMESTIC

2020	<b>Top 20 (1st grade diploma, approximately 400 participants)</b> , SPBU Olympiad in Informatics	Russia
2021	<b>Top 20 (1st grade diploma, approximately 400 participants)</b> , Innopolis Open Olympiad in Informatics	Russia
2021	<b>Top 10 (1st grade diploma, approximately 400 participants)</b> , University-Academic Olympiad in programming in Ural	Russia
2021	<b>Top 20 (2st grade diploma, approximately 400 participants)</b> , Olympiad "Lomonosov" in Informatics	Russia
2021	<b>Top 20 (1st grade diploma, approximately 400 participants)</b> , Moscow olympiad in informatics for school students	Russia
2021	<b>Top 70 (2st grade diploma, approximately 400 participants)</b> , SPBU Olympiad in Informatics	Russia
2021	<b>Top 80 (2st grade diploma, approximately 400 participants)</b> , Individual olympiad in informatics and programming	Russia

## Education

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### SPBU(Saint-Petersburg State University)

Saint Petersburg, Russia

BACHELOR IN COMPUTER SCIENCE

Sept. 2021 - Present

- Got a nominal St-Petersburg government scholarship for students on the first year of studying.