

Peshkov Artyom

STUDENT OF MODERN SOFTWARE ENGINEERING DIRECTION, SAINT PETERSBURG STATE UNIVERSITY

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“Always code as if the guy who ends up maintaining your code will be a violent psychopath who knows where you live.”

Summary

Current 2 year student of Saint Petersburg State University. Experience of developing some educational and independent projects. Persistent developer with a programmatic mindset and passion to solving challenging tasks who loves Kotlin and C++. Interested in learning new technologies, tools and approaches to solving tasks. Also want to obtain some big project development experience and team working skills.

Skills

Programming Kotlin, C, C++, Haskell, Python(basic knowledge), Coq(basic knowledge), PostgreSQL, LaTeX
Technologies Git, QT
Languages Russian, English

Projects

OSSL

Saint Petersburg, Russia

DEVELOPER

June 2020 - July 2020

- Android application development using Kotlin as a part of summer practice for school students.
- Working on both frontend and backend.
- Github: <https://github.com/ArtyomPeshkov/practice20-alias>
- Google Play: <https://play.google.com/store/apps/details?id=com.threemonkeys.alias>

Saint Petersburg State University

Saint Petersburg, Russia

DEVELOPER

- Development of Discord bot for Math and Computer Science faculty. Convenient way to handle course channels, create message channels for professor-students cooperation and inform students about different lectures and meetings.
- Github: https://github.com/spbu-math-cs/MCS_discord_bot

Saint Petersburg State University

Saint Petersburg, Russia

DEVELOPER

- Application with GUI written on Kotlin for some kind of sport competitions (running, swimming, cycling, skiing, etc.) which can help with counting results and showing different statistics.
- Github: <https://github.com/ArtyomPeshkov/sport-management-system>

Education

SPBU(Saint Petersburg State University)

Saint Petersburg, Russia

BACHELOR IN MATHEMATICS AND COMPUTER SCIENCE

Sep. 2021 - Now

Honors & Awards

DOMESTIC

- | | | |
|------|--|-----------------------------|
| 2020 | Winner (top 15% of 1000+ participants), Open Olympiad for school students | Saint Petersburg,
Russia |
| 2021 | Winner (top 80 of 1000+ participants), Open Olympiad for school students | Saint Petersburg,
Russia |
| 2021 | Winner (top 20% of 2500+ participants), Olympiad "Phystech" in mathematics | Saint Petersburg,
Russia |
| 2021 | Winner (top 5% of 1250+ participants), All-Siberian olympiad in mathematics | Moscow, Russia |

Attended Courses

C/C++ programming language course

Saint Petersburg, Russia

SAINT PETERSBURG STATE UNIVERSITY

Sep. 2021 - Sep. 2022

- C:
- The process of turning a program into machine code (compiler, assembler, linker).
- How does the function call work?
- Memory card: stack and heap.
- Pointers to functions. Intrusive lists.
- C++:
- Error handling (including exceptions).
- Development of libraries using generalized programming (templates) and metaprogramming.
- Overview of the STL standard library.
- Elements of multithreaded programming.
- Repository with all labs: https://gitlab.com/R_e_ap_e_r/cpp_labs. The most interesting are hw-01_bmp (about extracting part of an image and making 90 degree rotation) and hw-02_huffman (console utility for compression and decompression using Huffman coding)

Kotlin programming language course

Saint Petersburg, Russia

SAINT PETERSBURG STATE UNIVERSITY

Sep. 2021 - Sep. 2022

- Custom diff utility: https://github.com/ArtyomPeshkov/Kotlin_diff
- Key-value database: https://github.com/ArtyomPeshkov/Kotlin_kvdb
- Diagram builder with GUI: https://github.com/ArtyomPeshkov/Kotlin_diagram-visualization

Computer architecture

Saint Petersburg, Russia

SAINT PETERSBURG STATE UNIVERSITY

Sep. 2022 - Jan. 2023

- The blocks of the processor.
- Multi-cycle processor.
- Design of the control device.
- Memory organization.
- Simulation of CPU-cache-memory simple model: https://github.com/ArtyomPeshkov/Processor_cache_simulation
- Disassembler: <https://github.com/ArtyomPeshkov/disassembler>

Algorithms and Data Structures

Saint Petersburg, Russia

SAINT PETERSBURG STATE UNIVERSITY

Feb. 2021 - Now

- Data structures(heap, linked list, segment tree)
- Graph algorithms(bfs, dfs, Bellman-Ford algorithm, Floyd-Warshall algorithm, Cut vertices and Bridges algorithms)
- String algorithms(hashing, KMP, Z-function, suffix tree)

Theoretical informatics

Saint Petersburg, Russia

SAINT PETERSBURG STATE UNIVERSITY

Sep. 2022 - Jan. 2023

- Computability with finite memory, regular languages.
- Finite automata: deterministic, non-deterministic, two-way, probabilistic.
- Formal grammars and syntactic analysis algorithms.
- Computability and unsolvable problems, Turing machines.
- Complexity and hierarchies in time and memory.
- Reducibility and complete problems. P, NP, polynomial hierarchy, PSPACE.
- DFA/NFA simulation and DFA minimization: https://github.com/ArtyomPeshkov/DFA_minimisation_and_simulation
- Parsing simple arithmetic expressions using ANTLR:https://github.com/ArtyomPeshkov/Arifmetic_grammar

Other courses

Saint Petersburg, Russia

SAINT PETERSBURG STATE UNIVERSITY

- Haskell programming language.
- Discrete mathematics.
- Mathematical calculus.
- Algebra.
- Mathematical logic in informatics.
- Probability theory.