Denil Sharipov

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Education

Saint Petersburg University *Saint Petersburg, Russia*

Bachelor of Computer Science *2019 - 2023*

- **Program:** Modern Programming
- **Relevant courses:** C, C++, languages for JVM, functional programming, linear algebra, mathematical analysis, algorithms and data structures, formal languages theory, theory of computation, computational complexity theory

Projects

Schreier-Sims algorithm *individual project*

C, C++ *May. 2020*

- Implementation the Schreier-Sims algorithm in computational group theory
- The algorithm works with subgroups of permutation group and can be used for efficient order calculation, finding of orbits and stabilizers, checking if the element is the member of group

Computational linear algebra algorithms *individual project, current*

Haskell Data.Matrix, HUnit *November. 2020*

- Implementation some computational linear algebra algorithms, connected with finding approximate solutions of linear equation systems and eigenvalues of matrices
- Simple iteration and Gauss-Zeidel methods, Gershgorin circles finding algorithm
- QR decomposition, Givens rotation, Householder reflection algorithms
- Graph spectrum finding algorithm

SmartReader *team project*

Python3 Lxml, SpeechRecognition, Kivi, Unittest *April. 2020 - May. 2020*

- An application for reading books with synchronization between text and audio versions
- I developed the backend part which contains audio-text mapping algorithm development, parsing files in fb2 format, work with filesystem (saving/loading files of application)

Skills

Languages

- C++, C, Haskell, Python, Kotlin, Scala, Java, Julia, Latex

Tools and Technologies

- GitHub, GitLab, SVN, IntelliJ Idea, Android Studio, CLion
- C, C++ STL, Makefile, valgrind, ncurses, avr
- Python3 SpeechRecognition, Lxml

Algorithms and Data structures

- Four-year experience in solving algorithm tasks and implementing data structures
- Now algorithms and data structures are included in my research interests

English

- B2

Research interests

Exact algorithms, algorithms for NP-hard problems, graph algorithms, computational complexity, fine-grained complexity, functional programming.

Honors and Awards

2019 **1/100 place**, SPbU School Olympiad in computer science

2019 **3/60 place**, All-Russian School olympiad in computer science, Semifinal

2019 **Winner, top 40 / 500 participants**, MIPT School olympiad in mathematics