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
- Designed and implemented classes of permutation, Schreier tree and chain of stabilizers.

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
- The algorithms was implemented with maximum efficiency, therefore some advanced functional data structures, such as Zipper, was used.

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