

# Daniil Lyubaev

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## Education

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- **B.S. Mathematics, Algorithms and Data Analysis**

Saint-Petersburg State University, Mathematics and Computer Sciences department

3rd year, GPA: 4.3 / 5

Attended courses:

- Linux System Programming by Dmitry Sviridkin
- Java by Tagir Valeev
- Python by Nikita Sobolev.

## Programming experience

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- Minisandbox (C++) ([link](#))

Developed base of sandbox that runs binary in pivot\_root with team of four people

- Parallel transform with processes (C++) ([link](#))

Implemented a function that transforms given range in parallel using processes (not threads!), syncing with futex

- cp (C++) ([link](#))

Produced a replica of cp linux utility that can copy hardlinks, symlinks in same fs, and full files in different fs

- ldd (C++) ([link](#))

Created a replica of ldd linux utility that reads dynamic ELF section and shows dependent libraries

- Huffman archiver (C++) ([link](#))

Implemented Huffman compression/uncompression algorithm

- Socket HTTP file-transer server (Python, sockets) ([link](#))

Made a concurrent socket server and client for transferring files with HTTP header

- Django learning process (Python, Django) ([link](#))

Created a Django app with courses, students, lectures, calls to database without  $N + 1$  – problem

- Contribution to open-source NeoVim plugin AirLatex (Python) ([link](#))

Created pull requests on bug fixes in Python code

## Knowledge and skills

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- C/C++, Python, Java, Kotlin/Android.

- Have basic knowledge of operating systems, had experience with Django, PyGame, SFML.

- Languages: Russian – Native; English – Intermediate.