

Vasiliy Matrenin,
18 years old,
Saint-Petersburg, Russia.



C/C++ Developer

Projects:

- **Assembler compiler and CPU emulator:**

Project with my assembly language compiler and my format executable files executor (CPU emulator).

Repo link:

https://github.com/VasiliyMatr/MIPT_PROG_1stTERM/tree/master/T04CPU

- **Programming language compiler:**

Project with my programming language compiler. This compiler translates my programming language code to my assembly language code. I've used binary tree representation and recursive descent algorithm for all data translations. There are two data translations implemented: lang code -> tree and tree -> asm code

Repo link:

https://github.com/VasiliyMatr/MIPT_PROG_1stTERM/tree/master/T08LANG

- **Mandelbrot optimization:**

Project with Mandelbrot fractal calculation optimization. I used Intel intrinsics to vectorize data for better performance.

Repo link:

https://github.com/VasiliyMatr/MIPT_PROG_2ndTERM/tree/master/T05MANDEL

- **Hash table optimization:**

Project with my hash table implementation and hash table optimizations. I've used the Callgrind profiler, Intel intrinsics (crc32 hash intrinsic), and some other features to optimize my code.

Repo link:

https://github.com/VasiliyMatr/MIPT_PROG_2ndTERM/tree/master/T06HASH

Skills:

- **C/C++** - Junior.
- **X86-64** - Good processor architecture knowledge (cache, hardware parallelism, pipeline). Written some NASM code.
- **Make/Bush** - Used make in many projects. I know how to work with bush.
- **Python** - Basic skills.
- **Tex** - Good practice skills.
- **English** - Inter.

Education:

- **University:** First-term student in Moscow Institute of Physics and Technologies.
- **Department:** DREC, applied physics and mathematics.