Anton Golovinskii

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EDUCATION

Moscow Institute of Physics and Technology **2024 - 2028**
- Department of Applied Mathematics and Computer Science
- Bachelor of ”System programming and applied math”

HARD SKILLS

Languages: C, C++, x86 Assembler, Python
Tools: Git, Bash, Make/CMake, Nasm, Radare2, Valgrind

WORK EXPERIENCE

Huawei **Moscow, Russia**
Summer intern (OS Kernel) July - August 2025
Improving the efficiency of lists allocated in the SLAB

PROJECTS

Printf implementation in x86 assembler **x86-64**
- Specifiators: %d, %x, %o, %b (binary form of number), %c, %s, %%
- Buffered output for speedup
- Call according to ”fastcall” calling convention

Study of acceleration possibilities of the Mandelbrot set calculation **C++, SFML**
- Studied opportunities of compiler optimization flags (gcc, clang)
- Studied opportunities of compiler vectoriation (without direct use of intrinsics)
- Studied x86 vector instructions and AVX-intrinsic

Assembler and SPU (Soft Processing Unit) **C**
- SPU with its own instruction architecture and assembler
- Supports calculations with floating point numbers
- Has its own registers, stack for free usage, stack for calling (and returning from) functions, RAM for free usage
- Uneven code distribution (instructions use 1 byte, register numbers - 4 bytes (this was done specifically for educational purposes, although it is inefficient from a memory point of view), constants - 8 bytes)

ACHIEVEMENTS

- **Moscow School Olympiad (Robotics)** - 2nd degree (March 2024)
- **Regional stage of the All-Russian School Olympiad in Robotics** - Awardee (February 2024)

PERSONAL INFORMATION

- **Sport**: Motorcycling, Snowboarding (Freestyle), Rock Climbing, Wakeboarding
- **Hobby**: Assembly, disassembly and repairing electrical and technical devices