VASILII MATRENIN

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Russia, Moscow

System Programmer

EDUCATION

Moscow Institute of Physics and Technology   *2020 - 2024*

Applied Physics and Mathematics, DREC Department, Bachelors degree

Thesis: Synthetic execution traces generation for testing: `VasiliyMatr/bachelors_diploma`

Moscow Institute of Physics and Technology   *2024 - Present*

Applied Physics and Mathematics, DREC Department, Masters student

SKILLS

Languages:	C/C++, Rust, Lua, Bash, Assembly, Python
Software & Tools:	LLVM, Sol2, GTest, CMake, Make, VHDL, Git, Linux, debugging, profiling
Math:	Math Analysis, Linear Algebra, Diff Equations, Integrals, Digital Signals Processing
Other Skills:	CPU micro-arch, CPU functional sim, PLs VMs, PLs Design, LaTeX, English (C1)

PROJECTS (ALL AVAILABLE ON GITHUB)

Functional RISC-V simulator   *Sep 2023 - Jul 2024*

Repository: `VasiliyMatr/sim2023`

Features: MMU, Plugins support, 400-500 MIPS on 11 queens benchmark run on low-end laptop

LLVM practice   *Sep 2023 - Jul 2024*

Repositories: `VasiliyMatr/LLVM_Practice`, `VasiliyMatr/llvm-project`

Features: Tracing instrumentation pass, Frontend for toy language (based on Flex + Bison), Backend for toy ISA

JIT and AOT practice   *Sep 2024 - Jul 2025*

Repository: `VasiliyMatr/jit_and_aot`

Features: IR Library, Graphs Alogos (DFS, RPO, Dom Tree, Loop Tree), Peepholes, Checks Elimination

WORK EXPERIENCE

Huawei corporation, R&D in CPU & Software co-design   *Jul 2022 - Present*

- Implemented data processing/generation tools

- Participated in future directions discussions

- Managed small team (3 people)

- Mentored 2 junior devs

Intel corporation, IPP Domain internship   *Jul 2021 - Aug 2021*

- Investigated possibilities for Intel IPP data compression algos integration

- Optimized Intel IPP data compression algos

- My manager and mentor highly valued my work and sent good *feedback*