

ROMAN GLAZ

Architecture researcher, software engineer

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EXPERIENCE

Assistant-engineer

Huawei RRI

📅 july 2022 – now

- Coauthor of international patent (PCT): Computing performance improving method and electronic device (application not published yet).
- Created and took part in creation of architecture-dependent (ARM64) performance/power models and algorithms related to Linux kernel scheduler & frequencies scaling.

PET PROJECTS

- **RISC-V 64-bit functional simulator** – custom simulator with RV64IM instructions interpretation via threaded-code, MMU & TLB.
- **Echo Virtual Machine (EVM)** – custom register-based virtual machine with incremental garbage collector.
- **Vokerlee SSH** – custom secure shell implementation (TCP + UDP with delivery guarantee) with symmetric & asymmetric encryption, linux virtual terminals & cgroups.
- **Incremental *inotify* daemon-backuper** – incremental backup-system (daemon), implemented via *inotify* Linux kernel subsystem.
- **Gem5 & Linux:**
 1. **Gem5** – added cache PMU events for ARM64, 3-level cache CPU-cluster system.
 2. **Linux 6.1 patches for Gem5** – implemented *cpufreq* & *devfreq* drivers (+ *clk*) for DVFS support for all components in Gem5.
- **LLVM practise** – LLVM front-end of imperative language & own LLVM back-end of RISC-V like architecture with custom graphics extensions.
- **RISC-V 64-bit verilog simulator** – simulator of executable file with RV64I instructions written in System Verilog language.

EDUCATION

Bachelor of Radio engineering and computer technology

Moscow Institute of Physics and Technology

📅 sept. 2020 – july 2024

- CGPA 9.41/10, top 1 department graduates, top 4 university graduates
- **Thesis topic:** "Memory aware CPU frequency scaling policy in Linux kernel".

Master of Radio engineering and computer technology

Moscow Institute of Physics and Technology

📅 sept. 2024 – now

TECHNICAL SKILLS

Programming languages / Architectures

C, C++, Python / RISC-V, x86-64, ARM64

Technologies

Linux API, MPI, OpenMP

Languages

English – upper intermediate

Other

Machine learning (lecturer: Vorontsov K. V, based on **Yandex SDA course**), **computational maths**, computer networks

Would like to delve into

Rust, architecture-dependent part & security aspects of Linux kernel

EXTRA INFO

- Member of the national team for the International Physics Olympiad 2020 (cancelled due to Covid19).
- Tutor in introduction to compilers & x86-64 architecture courses in 2021/2022.
- Powerlifting enjoyer