Andrey Derzhavin

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Education

Moscow Institute of Physics and Technology *2023 – 2025 / Dolgoprudny, Russia*
M.S in applied math and physics

Moscow Institute of Physics and Technology *2019 – 2023 / Dolgoprudny, Russia*
B.S in applied math and physics

Physics and math lyceum 30 *2017 – 2019 / Saint Petersburg, Russia*

Extra Education

"Uses and applications of C++ language" *Sep 2020 – Apr 2021*
MIPT course. Lecturer – K. Vladimirov, Intel.

"Simulation tools of CP and OS and learning programs' behaviour" *Sep – Dec 2020*
MIPT course. Lecturer – I. Petushkov, Huawei.

"Industrial Programming. Part 1. C language." *Sep – Dec 2019*
MIPT course. Lecturer – I. Dedinsky, Mail.Ru.

Experience

Huawei RRI *Jul 2021 – Present / Moscow, Russia*
- Led a project related to functional simulation. Participated in cross-project activities.
- Conducted research on improving microarchitectural Design space exploration with low order paremeters. Developed a parallel, simulator-independent framework for finding optimal uArch configuration
- Implemented tool which finds loops in program's CFG using Boost Graph. Conducted research on dynamic cycles classification, estimate potential performance improve from enhancing loop termination prediction using ISA hint

Acronis Internship *Jul 2020 – Nov 2020 / Remote*
- Learned right-context grammars, proposed & investigated several ways of applying them to static analysis of C++ source code
- Arcticle "Usage of right-context grammars in static analysis of source code on C++", participation in two conferences

Projects

Triangles *Feb 2022 – May 2022*
Educational project
- Program to check intersection of large amount of triangles

Sim2022 *Oct 2022 – Jan 2023*
Educational project
- Functional simulator of RISC-V ISA w/ by-BasicBlock execution, code caching & TLB.
- Implemented autogeneration of decoder from ISA-description.

leech-compiler *Sep 2023 – May 2024*
Educational project from 5TH course
- Implementation of compiler IR for custom VM. Developed several popular optimization passes & analyses

Skills

Programming Languages C | C++ | Python
Software Development git | make | CMake | Linux (WSL2, Ubuntu) | LaTeX
Frameworks & Libraries LLVM IR | OpenCL | Numpy | Boost
Languages ***C2:*** Russian ***C1(IELTS):*** English

Extra

- Interested in compilers, system programming, functional simulation
- Resolute, hardworking, detail-oriented
- Hobbies – football, history