Andrey DERZHAVIN

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EDUCATION

PHYSICS AND MATH LYCEUM 30   *2017 – 2019 / Saint Petersburg, Russia*

MOSCOW INSTITUTE OF PHYSICS AND TECHNOLOGY   *2019 – 2023 / Dolgoprudny, Russia*

B.S IN APPLIED MATH AND PHYSICS

MOSCOW INSTITUTE OF PHYSICS AND TECHNOLOGY   *2023 – 2025 / Dolgoprudny, Russia*

M.S IN APPLIED MATH AND PHYSICS

EXTRA EDUCATION

"INDUSTRIAL PROGRAMMING. PART 1. C LANGUAGE."   *Sep – Dec 2019*

MIPT COURSE. LECTURER – I. DEDINSKY, MAIL.RU.

"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.

EXPERIENCE

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

HUAWEI RRI (BASE CHAIR)   *Jul 2021 – Present / Moscow, Russia*

- 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

- Conducted research on improving microarchitectural Design space exploration with low order paremeters. Developed a parallel, simulator-independent framework for finding optimal uArch configuration

- Led a project related to functional simulation. Participated in cross-project activities.

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++ ***Codegen, Scripting:*** Python
SOFTWARE DEVELOPMENT	git	make	CMake	Linux (WSL2, Ubuntu)	LaTeX
FRAMEWORKS & LIBRARIES	LLVM IR	OpenCL	Numpy
LANGUAGES	***C2:*** Russian ***C1(IELTS):*** English

EXTRA

- Interested in compilers, system programming
- Resolute, hardworking, non-contentious
- Hobbies – football, history