Vladimir Gukasian

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About me

I developed an interest in programming during my 11th grade, where I gained a foundation in the Python language. However, it was during my first year at MIPT when I truly immersed myself in programming, specifically in the C language, as I joined an advanced group led by I. Dedinsky. Under his guidance, I completed a course on "Introduction to Emulation of Computational Systems, Compiler Technologies, and Industrial Programming."

What I appreciate about programming is the unlimited spectrum of tasks and possibilities it offers. All that's required is a fresh mind and a laptop to work with. I also enjoy the creative aspect of this field, as there are numerous solutions to any given problem.

Education

- **Moscow Institute of Physics and Technology** — Moscow, Russia
  Bachelor of Applied Mathematics and Physics, MIPT DREC — *Sept. 2022 - Aug. 2026 (Present), GPA: 9.36*

Projects

- **Binary Translator**
  C

  This project is a description of the development of a binary translator for my own programming language. In the process of development, I also worked with a virtual processor that I created, which serves as an alternative method of executing programs. The goal of my work was to study the compilation process and compare the performance between executing a program through my binary translator and the virtual processor.

- **Hash table optimization**
  C | Assembly | SIMD | KCachegrind

  The aim of this project is to study the potential for optimizing hash functions and hash table infrastructure in order to improve their performance. Additionally, it involves conducting an analysis to determine the necessity of specific optimizations.

- **"Armenian" language compiler**
  C | Assembly | SIMD

  Compiler for my own programming language. Translating into my own assembly and generating byte-code for virtual CPU

- **Mandelbrot set visualization**
  C | Assembly | SIMD | C++

  The goal of this project is to explore the possibilities of optimizing code using SIMD instructions and vector processing and apply them to render the Mandelbrot set.

Programming Skills

- **Programming Languages**: C, Assembly
- **Technologies**: Git, LaTeX, Make

Other skills

- **Languages**: Russian, Armenian, English (B2)
- **Soft skills**: Responsibility, independence, communication skills, quick learning, desire to learn something new, hard work, determination, executive