

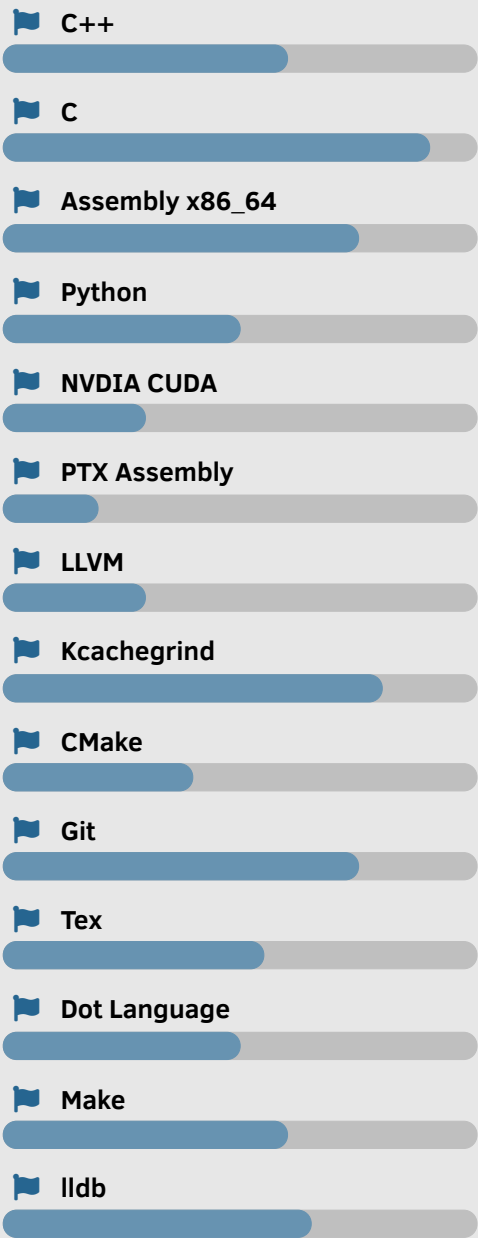


Ivan Vodolazhenko

MIPT Bachelor Student

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Skills



Education

| | | |
|-------------|--|----------------|
| 2012 – 2023 | High School Education Graduated with a gold medal. | General School |
| 2012 – 2019 | Musical Education Graduated with a degree in accordion. | Musical School |
| 2020 – 2023 | Physics & Mathematics & Informatics & Chemistry The prize-winner of the final tests. | ZFTSH MIPT |
| 2023 – ... | Bachelor – Informatics & Computer Engineering <i>Finished:</i> The course of system programming and compiler technologies, C, assembly, Computer Architecture and Operating Systems <i>Currently:</i> Concurrency course, C++, Algorithms | MIPT |

Experience

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|-------------------|--|
| 07.2024 - 08.2024 | Baikal Electronics <i>Intern in GPGPU Group</i> Creating simulator of GPGPU. Working with CUDA, PTX assembly. |
|-------------------|--|

Languages

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| Russian <i>Native language</i> |
| English <i>12+ years of studying, B2 Level</i> |

Grades

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| MIPT Overall Average <i>7.8/10.0</i> |
| MIPT Programming Average <i>8.7/10.0</i> |

Achievements

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|------|--|
| 2022 | Olympiad <i>Phystech International</i> Prize-winner in physics. |
| 2022 | Sport <i>Tennis</i> Candidate for Master of Sports. |

Projects

| | |
|-------------|--|
| 2024 | Graphic Editor <i>Tools: C++, SFML</i> A graphic editor designed and implemented from scratch using the SFML graphics library. It supports pencil drawing, creating geometric shapes, working with files and applying filters. New tools and filters can be added using dynamically linked plugins that comply with the developed standard. [Link to GitHub] |
| 2023 – 2024 | My Programming Language <i>Tools: C, Assembly x86_64, Dot</i> Compiler for my own programming language. It consists of a parser, a simple optimizer and a translator. It compiles program for my processor emulator or for intel x86_64 architecture. [Link to GitHub] |

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Soft Skills

- Responsible
- Hard-working
- Punctual
- Reliable
- Sociable

2024

Hash Table

Tools: C, Assembly x86_64

Implementation of a hash table and optimization of its operation using low-level machine code (SIMD instructions, inline assembly language, functions written in assembly language).

[\[Link to GitHub\]](#)

2024

3D Sphere

Tools: C++, SFML

Rotating 3D sphere with changing illumination and ray casting.

[\[Link to GitHub\]](#)

2024

Mandelbrot

Tools: C, Assembly x86_64

Creating an image of the Mandelbrot set and optimizing the creation process using SIMD instructions.

[\[Link to GitHub\]](#)

2023

Processor

Tools: C

My processor emulator. It supports a set of commands written in my assembly language.

[\[Link to GitHub\]](#)

2023

Differentiator

Tools: C, Dot

This program finds the derivative of any mathematical expression and creates a LaTeX document with the result.

[\[Link to GitHub\]](#)

2024

My Printf

Tools: C, Assembly x86_64

Standard C function *printf* realization using NASM. It is compatible with stdcall.

[\[Link to GitHub\]](#)