ROMAN GONCHARENKO · Junior GoLang Developer
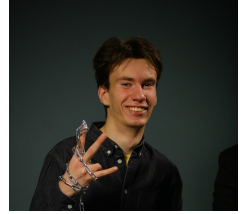
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EDUCATION

- **Moscow Institute of Physics and Technology (MIPT)** — Moscow, Russia
  Bachelor of Department of Radio Engineering and Computer Technology (DREC) — *September 2021 - Present*

- **Kolmogorov's boarding school of Moscow State University (AESC MSU)** — Moscow, Russia
  science/maths class — *September 2019 - August 2021*

EXPERIENCE

ISP RAS — Moscow, Russia

- *Intern at Network department* — *June 2022 - Present*

  `Network` `GoLang` `Linux` `Docker` `NoSQL` `gRPC`

    ○ Analyzed the principles of topology building in different IGP/EGP protocols (OSPF/BGP/ISIS).
    ○ Utilized docker containers in building and testing custom network configurations.
    ○ Developed a Golang module integrated it in a system:
      ∗ Wrote ISIS protocol parser using Gopacket.
      ∗ Built ISIS topology using parsed traffic.

HUAWEI / ISP RAS — MIPT, Moscow, Russia

- *Student of training courses by Moscow compiler lab & Huawei (All projects are present on Github)* — *August 2021 - May 2023*

  `C++` `System Design` `C` `Assembly`

    ○ Learnt to build software architecture, develop industrial quality programmes.
    ○ Developed highly optimized industrial quality software modules using acquired high quality knowledge of system architecture, application of language features.

MAIN PROJECTS

- **Streaming Video Website** — MIPT, Moscow, Russia — *March 2023 - April 2023*

  `Golang` `Rest API` `SQL` `Docker` `Nginx` `Swagger`

  Backend Pet project on building a video streaming website using modern stack of technologies.

- **Simple Photoshop** — MIPT, Moscow, Russia — *April 2023*

  `C++` `MVC` `Design Patterns` `SFML`

  Pet project oriented on using design patterns in constructing apps.
  Used Patterns: Composite, Command, Singleton, Abstract Factory
  Program allows to draw, use given tools on a canvas.

- **JIT compiler** — MIPT, Moscow, Russia — *May 2022*

  `C`

  A JIT compiler which translates binary code from bytecode of custom soft-CPU
  (a project that contains a resemblance of own ASM-CPU) into x86-64 architecture.

- **Hash table analysis** — MIPT, Moscow, Russia — *April 2022*

  `C` `Assembly` `Graphviz` `Callgrind`

  Analyzed 6 given hash functions with graphs and detailed description.
  Optimized the work of a hash table using different kinds of optimizations such as
  inline functions, asm functions, intel intrinsics.

- **Mandelbrot set optimization** — MIPT, Moscow, Russia — *March 2022*

  `C` `Assembly` `SFML`

  Managed to construct a Mandelbrot set using a graphic library SFML.
  Using SIMD instructions (AVX instructions) the project was optimized.

Programming Skills

- **Languages**: GoLang, C++, C, Assembly

- **Graphic libraries**: QT, SFML

- **Technologies**: Linux, SQL, Docker, Git, LaTeX

- **Knowledge**: Algorithms, Data Structures, Network, Linux, Databases

Other

- **Environments of interest**: App development, Backend development, DevOps, Network

- **Languages**: English (Intermediate), Russian (native)

- **Personal traits**: Proactive, eager to ask questions, adaptable

- **Hobbies**: Workout, sports (football, volleyball, skiing), music (piano/guitar