### ROMAN GONCHARENKO

# Junior GoLang Developer

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#### Moscow Institute of Physics and Technology (MIPT)

Bachelor of Department of Radio Engineering and Computer Technology (DREC)

Moscow, Russia September 2021 - Present

EXPERIENCE

ISP RAS Moscow, Russia June 2022 - Present

Network department

- GoLang | gRPC | REST | Linux | Docker | SQL | NoSQL | Apache Kafka | Network Technologies o Built and integrated a user authorization service into microservice system.
  - Utilized docker containers in building and testing custom network configurations.
  - Analyzed the principles of topology building in different IGP/EGP protocols (OSPF/BGP/ISIS).
  - o 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.
  - o Developed highly optimized industrial quality software modules using acquired high quality knowledge of system architecture, application of language features.

#### Main Projects

#### Pirater - Streaming Video Website

Golang Rest API SQL Docker Nginx Swagger

MIPT, Moscow, Russia March 2023 - April 2023

Backend Pet project on building a video streaming website using modern stack of technologies. Pirater is A pretty Website with user authorization, video player based on HLS streaming.

Interesting Technologies:

- o Docker: conterization of all app's services (Mysql, backend servers, Webserver, Redis)
- NGINX: web server for load balancing multiple backend instances + serving static files
- $\circ$  **Redis**: session storage cache
- o Swagger: API documentation

brief project presentation is present on Github

#### Simple Photoshop

C++ MVC Design Patterns SFML

MIPT, Moscow, Russia April 2023

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

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

C Assembly Graphviz Callgrind

MIPT, Moscow, Russia April 2022

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

C Assembly SFML

MIPT, Moscow, Russia March 2022

Managed to construct a Mandelbrot set using a graphic library SFML Used SIMD instructions (AVX, AVX-2) to optimize the project

## Programming Skills

- Languages: GoLang, C++, C, Assembly
- Technologies: SQL (PostgreSQL, MySQL), NoSQL, Docker, K8S, Linux, Apache Kafka, Git
- Graphic libraries: SFML, QT
- Knowledge: Basic System design, Basic Algorithms and Data Structures, Network Technologies, Linux, Databases

#### OTHER

- Environments of interest: App development, Backend development, DevOps, Network technologies
- Languages: English (Intermediate), Russian (native)
- Personal traits: Proactive, eager to ask questions, adaptable
- Hobbies: Workout, sports