MELNIKOV IGNAT

Trainee researcher, Student Developer, Programmer

@ melnikov.ignat@phystech.edu +79120218023 Dolgoprudny, Russia github.com/Minerkow

EDUCATION

Moscow Institute of Physics and Technology

Sept. 2019 – Present Dolgoprudny, Russia

- Bachelor of Applied Mathematics and Physics

Institute for Information Transmission Problems of the Russian Academy of Sciences (Kharkevich Institute)

June. 2021 – Present Moscow, Russia

- Trainee researcher in the laboratory of Information technologies for the transmission, analysis and protection of information

TECHNICAL SKILLS

C++, NS-3
Golang, Web evelopment basics
Python, numpy
LabVIEW Basics
Multithreaded Programming, MPI
Probability Theory, Markov chains
Linear algebra
Blockchain and Cryptography Basics
Unix Basics
Physics, theoretical and quantum mechanics
Multiple Access Methods, ALOHA, CSMA, DCF
Digital Signal Processing Basics
Information and Coding theory Basics, LDPC
Computational Mathematics

SOFTWARE SKILLS

- C/C++
- Golang
- Python
- LabVIEW
- SQL Basics
- Linux OS, POSIX, System 5
- Java
- TeX/LaTeX

SKILLS INTERESTS

Languages:

- Intermediate in English

Sports:

- Break Dance
- Skating
- Gymnastics
- Ride a motocross bike
- Cycling
- Alpine skiing and snowboarding
- Hiking

Interests:

- Decentralized Applications
- Telecom
- Physics

MOTIVATION

Now I mainly solve mathematical problems, and due to the smallness of our team, the code is not strictly structured and organized. I would like to get more experience in industrial programming.I am fascinated by complex databases such as blockchain, distributed hash tables, DAG networks, and there is a great motivation to study this further.

PROJECTS

Layered Schedule for Information Bottleneck

- ITAS, 2021
- C++

P2PChat

In process

- Modern version of FireChat, building secure Mesh networks on the Android platform
- Java, Android Development

Parallel computation of integrals

- Parallel computation of the integral on several computers with a linear increase in speed with increasing cores on computers.
- C, Unix

Small analytical geometry library

- C++

ParaCL

- Your Turing complete programming language
- C++

Calculation of electrical circuits

- Calculation of electrical circuits.
- C++

AVL Tree

- C API for AVL Tree

Reddit clone

- Go

ALOHA, CSMA

- C++, NS-3

Pitch Shifter, Symmetric Bandwidth Analysis with AWGN

- LavVIEW

LDPC

- Python, C++

COURSES

- C and C++, Intel and MIPT
- C++, Yandex
- Unix, POSIX and System 5, Virtuozzo and MIPT
- Cryptography I, Stanford University
- Bitcoin and Cryptocurrency Technologies, Princeton University
- Telecom, Institute for Information Transmission Problems
- Telecom, Cisco and MIPT
- Multiple Access Methods, ALOHA, CSMA, DCF , Institute for Information Transmission Problems
- Digital Signal Processing Basics, Institute for Information Transmission Problems
- Markov chains, Institute for Information Transmission Problems
- NS-3 and LabVIEW basics, Institute for Information Transmission Problems
- Developing web services in Golang, VK Education