

RUSLAN AKHMETOV

📅 4th Jan 2002

@ denrenruslan@gmail.com

📍 Moscow, Russia

🌐 github.com/DenRen

OPEN-SOURCE PROJECTS

Completed Algorithms Course on C++

github: <https://github.com/DenRen/BabichevAlgo>

- External sort, dynamic programming, b-trees, graphs, number theory, geometry.
- Solutions and Conditions to problems from the course, as well as many tests for them.

Completed Multithreading and Lockfree Courses on C++

github: <https://github.com/DenRen/NormalProgramming>

- Split Ordered List, TAS, TTAS, TicketLock, Efficient Multithreading matrix multiplication

Completed File Systems Course

github: <https://github.com/DenRen/filesystems-101-exercises>

- ext2-fuse, ext2 and ntfs image reader - dirs, files and walk path, ext2 sparse files, io_uring, ps, lsof, fuse, btree, grpc

Succinct on-disk algorithm (Graduate work)

github: <https://github.com/DenRen/life-on-disk>

- Two data structures are explored, implemented and compared: String B-Tree and String B-Tree + Geometric Burrows-Wheeler Transform. The results were obtained that the compressed structure takes up 4 times less space on the disk compared to a regular one, but works twice as long.

Binary Translator

github: https://github.com/DenRen/BamblBi_Translator

- Project (5K lines) translate the text format assembler to binary format in a wide range of x86 architecture instructions

Bitonic Sort on GPU

github: https://github.com/DenRen/HW_Vladimirov/tree/main/hidra

- A vectorized and super multi-threaded number sorter based on the bitonic sorting algorithm. Outperforms (-O3) CPU by 7 times

Archiver on GPU

github: <https://github.com/DenRen/ArchiverGPU>

- Archives very quickly on the GPU

Calc integral in VLAN

github: <https://github.com/DenRen/TaskLunev>

- The most interesting of the projects is the calculation of a definite integral on many computers in parallel. Tested in a local network on 8 computers with 8 threads

Printf on clear ASM

github: https://github.com/DenRen/ASM-UO-printf_

- Pure assembler printf that recognizes insertion of string %s, binary format %b, octal: %o and hex %x

Robo arm on STM32

github: <https://github.com/DenRen/MicroFlex>

- Stepper motor drivers and robot arm control code

Simple Graphic lib on DX11

github: <https://github.com/DenRen/DirectGraphic>

- A simple 2D graphic lib on 3D direct library

LuQulc

github: <https://github.com/DenRen/LuQulc>

- A quantum programming language that immediately executes

PROFESSIONAL SKILLS

C++17

C

ASM

Git

Bash

PyTorch

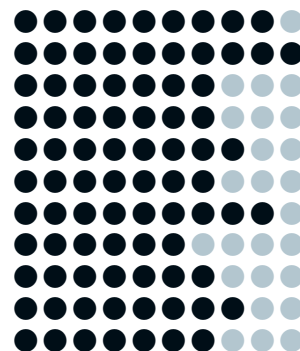
Algorithms

LockFree Algo

Multithreading

Linux

OpenCL



GOALS

My goal is to improve people's quality of life by making professional IT contributions to the software that surrounds them. I want to join a strong team that works with full dedication and makes a useful product to contribute and grow surrounded by IT gurus.

STRENGTHS

• Development

C++17

C17

OpenCL

ASM

Bash

Python3

Java

• Libraries and Frameworks

STL

googletest

OpenCL-CLHPP

PyTorch

PyTorch-Lightning

DirectX11

MPI

LL (for STM32)

• Development Tools - IDE

VS Code

Neo Vim

CLion

Qt Creator

Visual Studio

WORK EXPERIENCE

Farvater, Middle C++ developer

📅 June 2022 - Dec 2023 📍 Moscow

High-effective low-latency real-time system digital energy substation

Huawei, Junior C++ developer

📅 June 2021 - Sep 2021 📍 Moscow

Binary translator team

EDUCATION

MIPT

Sep 2019 - June 2023 - Bachelor

Sep 2023 - Master

LANGUAGES

Russian

English B2

