

EKATERINA MOZZHEVILOVA

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EDUCATION

MIPT

Incomplete higher education. Phystech School of Applied Mathematics and Informatics.

Dolgoprudny, Russia

2018 - 2020

SPbSTU of Peter the Great

Bachelor of Applied Mathematics and Computer Science

Saint Petersburg, Russia

2021 - 2025

PROJECTS

Solving the problems of finding the maximum flow in a graph | C++

[GitHub: Sources](#)

- Developed the solution to the problem of finding the maximum flow in the network has been implemented.
- Two algorithms were used: Goldberg and also Malhotra - Kumar - Maheshwar.
- The final complexity of both algorithms $O(V^3)$ (V is a number of vertexes in graph)
- Implemented Network storage class with traversal iterator
- The classes are templates
- It also has its own error system.

Designing a Database for a Store | DDL / DML (PostgreSQL)

[GitHub: Sources](#)

- Designed database for a cosmetics retail store
- A logical database scheme with a description of entities and relationships has been developed
- The database is in Boyce-Codd Normal Form
- Also designed *view* to collect statistics from the database

Building an NFA from a formal language | C++, gtest

[GitHub: Sources](#)

- An algorithm has been implemented that allows, according to the description of the formal language, to obtain the corresponding non-deterministic finite automaton
- Testing is carried out by means of the library *gtest*

SKILLS

Programming languages: C++, Python, SQL (Postgres), Matlab, Java

Technologies: Git, bash, gtest

Knowledge: Algorithms and data structures, Calculus and Analysis, Number theory, Linear Algebra, Mathematical Logic, Probability theory, Mathematical statistics

TEACHING EXPERIENCE

Olympiad Programming tutor

Summer Olympic training school

July 2019 — August 2019

Innopolis University

Olympiad Programming tutor

Faculty of Competitive Programming

September 2019 — December 2019

Phystech Lyceum

AWARDS

Moscow quarterfinal ICPC

47th place out of 277 participants

2020

The final stage of the All-Russian Olympiad for Schoolchildren in Informatics

118th place out of 244 participants

2018

Moscow School Olympiad in Programming

52th place out of 323 participants

2018