# Mirzofirdavs Zaynidinov

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### **EDUCATION**

Bachelor of Science in Applied Mathematics and Computer Science

National Research ITMO University

Sep. 2020 - Jun. 2024

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197022 St. Petersburg, Russia

Relevant coursework: Java, C++, Algorithms and Data Structures, Computer Architecture, Discrete Math, Linear Algebra, Operating Systems, Web Programming, Differential Equations, Mathematical Analysis

## SELECTED PROJECTS

# Projects implemented using Java

- Expressions Parser implemented the parser which can parse simple operations with variables and constants and as a result returns the expression evaluation result, added comprehensive error handling and exceptions processing
- $\circ$  NMK Game implemented a console game like a tic-tac-toe with grid of size n  $\times$  m and k stones
- Tic-Tac-Toe Game developed a classic version of tic-tac-toe game
- Deque developed fully functional deque based on dynamic array
- $\circ~\mathbf{LinkedQueue}$  implemented doubly linked list data structure
- FastScanner implemented own buffered scanner which reads data byte-by-byte

# Projects implemented using C++

- LRU Cache created simple LRU cache with pool allocator
- Calculator with Trigonometry Functions created a console calculator with trigonometry functions support
- Genome Assembly a program that receives a string of DNA strands at the input and uses it to build an Euler Path to get the genome
- Pi Value Approximation using Monte-Carlo Method approximated calculation of the Pi value using the Monte-Carlo method
- The Percolation Problem gives an estimation of the percolation problem using the Monte-Carlo method

### Projects implemented using Bash

- $\circ$  Linux-Trash created the simple trash like the Linux operation system trash, with methods like rmtrash, untrash, backup, upback
- Memory Management in the Linux Operating System a program that conducts experiments with memory in the Linux operating system to understand how it works and how its parameters change during overloads

#### Web Programming Course

## CodeForces Clone

- developed a web application which repeats CodeForces functionality like creating posts and adding comments and etc.
- implemented multiple CRUD applications like user and post management
- developed authorization using JWT
- o Stack: Java, FreeMarker, Spring, AJAX, Vue.js, MariaDB

### Programming Skills

Languages: C++, Java, Python, JavaScript, Bash

Frameworks & Tools: Spring Boot, Vue.js, Git

IDEs: CLion, CodeBlocks, IntelliJ IDEA, PyCharm, WebStorm and others

#### ACHIEVEMENTS

**Prize-Winner**, Samara University Olympiad in Math (3rd degree diploma – 300+ participants)

Prize-Winner, Tajikistan National Competitive Programming Contest (3rd degree diploma – 1000+ participants) 3x Prize-Winner, Tajikistan Regional Programming Contest (2nd and 3rd degree diplomas – 100+ participants)