Elena Petrova

St. Petersburg, Russia

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Education

Saint Petersburg State University

Master of Science in Applied Mathematics and Computer Science

Sep 2019 – Jun 2021 | St. Petersburg, Russia

GPA: 4.9/5.0

Activities: Competitive Programming Team Captain, Mathematics Olympiad Organizer, Data Science Club

Relevant Coursework: Algorithms and Data Structures, Computational Mathematics, Optimization Methods, Mathematical Modeling, Statistical Analysis, Machine Learning, Parallel Computing

Novosibirsk State University

Bachelor of Science in Mathematics

Sep 2015 – Jun 2019 | Novosibirsk, Russia

GPA: 4.8/5.0

Work Experience

Algorithm Engineer | Yandex | Jul 2021 - Present | St. Petersburg, Russia

- Developed ranking algorithms for search results that improved relevance metrics by 15%.

- Implemented efficient data structures and algorithms for processing large-scale data.

- Optimized computational complexity of critical systems, reducing latency by 40%.

Software Developer | JetBrains | Feb 2020 - Jun 2021 | St. Petersburg, Russia

- Contributed to IntelliJ IDEA's code analysis and refactoring tools using Java and Kotlin.

- Implemented graph-based algorithms for static code analysis.

- Developed performance optimization tools for detecting bottlenecks in Java applications.

Skills

Algorithms: Graph Algorithms, Dynamic Programming, Computational Geometry, String

Algorithms, Optimization Algorithms

Programming: C++, Java, Kotlin, Python, Go, Rust

Mathematics: Linear Algebra, Calculus, Probability Theory, Statistics, Discrete Mathematics

Performance Optimization: Algorithm Analysis, Profiling, Memory Optimization, Concurrency, Parallelization

Data Structures: Advanced Trees, Hash Tables, Heaps, Segment Trees, Fenwick Trees, Suffix Arrays

Other: Competitive Programming, Problem Solving, Technical Writing, Code Review, System Design

Certificates

Meta: Algorithms Expert Certification

CODEFORCES: Master Level Programmer

Google: Advanced Data Structures and Algorithms

Awards

Medalist - International Collegiate Programming Contest (ICPC) World Finals

1st Place - Russian Code Cup 2022

Best Paper Award - Algorithms and Computation Conference