Alambek Gulamidinov

EXPERIENCE

NEPLA Co.

Seoul, South Korea

Software Engineer

Mar 2024 - Present

- Implemented Redis Cache Tagging to manage and invalidate cache entries, achieving up to 10 times faster object retrieval.
- Engineered a JWT-based authentication and authorization system for the admin dashboard, improving security and user session management.
- Optimized expert score calculation by normalizing the database and implementing a cron scheduler, making top experts calculation **3x faster**.
- Developed REST APIs for server operations, focusing on secure, scalable, and maintainable code practices.

Stack: NestJS, Postgres, Prisma ORM, AWS, React, NextJS, Redis, TypeScript

PAL Lab

Ulsan, South Korea

Software Engineer, Intern

Mar 2023 - Jun 2023

- Automated image processing techniques, achieving a **2x reduction** in manual adjustment time by implementing spatial cutoff adjustments with Gaussian blur.
- Facilitated seamless data synchronization between Android SQLite and server databases, ensuring the integrity
 of 1000+ survey questionnaires storage in the cloud.
- Resolved critical server-side user authentication/authorization issues by overhauling code and establishing secure cloud connectivity.

Stack: Java, Express.js, MongoDB, Passport.js, OpenCV, JavaScript

OnSquare

Seoul, South Korea

 $\overline{Software\ Engineer}$, Intern

Dec 2022 - Feb 2023

- Upgraded video and image adjustments through multithreading with the Worker API, improving processing time for images and videos by 3 times.
- Spearheaded the development of a TeX-rendered math expression viewer, enhancing the readability and accessibility of complex mathematical formulas on the platform.
- Engineered a comprehensive History module, enabling robust undo/redo functionality.

Stack: Node.js, KaTeX, TypeScript, Redom

Software Engineer, Intern

Jan 2022 - Mar 2022

- Achieved a **2.4x speed** increase in audio processing by migrating the audio editor to the Web Audio API, resulting in a faster processing pipeline.
- Designed **3 types** of interactive charts for data and audio parameter visualization, improving user engagement and understanding of complex data sets.
- Optimized audio data conversion algorithm by 2x and reduced codebase by 30%.

Stack: Redom, JavaScript, D3.js, Aurora.js

PROJECTS

Maze Solver Project | Java, C++

Developed an advanced Maze Solver application that employs 3 different algorithmic strategies (Breadth-First Search, Depth-First Search, and A* Search) to find solutions to complex mazes.

Custom Language | Scala, C++

Designed a unique static programming language inspired by C++ semantics and logic, enabling 10+ features such as recursion, loops, if-else operations, and more.

EDUCATION

Ulsan National Institute of Science and Technology (UNIST)

Ulsan, South Korea

Bachelor of Computer Science and Engineering

Aug 2019 - Feb 2024

Ranked 10th among young universities and 175th worldwide by THE 2023

AWARDS AND ACTIVITIES

Microsoft Learn Student Ambassador, Aug 2023 - Feb 2024

Promoted leadership and fostered a strong tech community by organizing 2+ events and mentoring peers in technical and career development.

UNIST, Advanced Programming: Teaching Assistant, Feb 2023 - May 2023

Assisted course instructor helping 50+ students to learn C/C++ and programming fundamentals. Mentored freshmen in data structures and algorithms.

Eurasian Team Olympiad in Informatics: Bronze medal, Dec 2017

National Olympiad in Computer Science: 3rd place, Mar 2017

Asia-Pacific Informatics Olympiad: Honorable Mention, May 2016