

Rachel (Younwoo) Park

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Education

Sungkyunkwan University

Bachelor of Science, Computer Science & Engineering

GPA 3.98

Relevant Coursework: Distributed Systems, Operating Systems, Data Structures, Algorithms, Web Applications

Study Abroad: University of California, Santa Cruz

Santa Cruz, CA

Experiences

Research Intern

March 2024 - Present

Sungkyunkwan University | LSM-Tree, Distributed Database Systems

Suwon, Korea

- Currently researching LSM-tree compaction offloading in distributed database systems at the Data Intensive Computing Lab (under Prof. Beomseok Nam)

Full-Stack Engineering Intern, Passes

Dec. 2024 - Present

Passes | Typescript, NestJS, React, React-Native, MySQL, Docker, AWS

LA, California

- Handled end-to-end full stack development across Web, iOS and Android platforms
- Over 50 PRs merged and developed 30+ user-facing features** (e.g., creator leaderboard, analytic statistics) to boost engagement and user satisfaction, along with facilitating local development infra through AWS Lambda
- Collaborated with the Data Science team** to implement a **context bandit model, driving creator profit growth by 32%** and optimizing revenue.
- Improved operational efficiency by implementing various internal features such as admin logs and user notes.

Backend Engineering Intern

Jan. 2025 - Mar. 2025

Lablup | Python, Rust, aiohttp, PostgreSQL, Docker, VM, Git

Seoul, Korea

- Contributed to Backend.AI, an open-source GPU virtualization system written in Python, by improving core functionality and optimizing performance.
- Replaced etcd with a Raft-based wrapper to enhance distributed consensus and improve system reliability.
- Migrated the Redis queue to Kafka, resolving memory leaks and overflow issues that previously caused service crashes, resulting in a **99.9% uptime improvement and 50% faster message processing**.

Python Study Group Instructor

Mar. 2024 - Oct. 2024

Samsung Institute of Technology | Python, NumPy, Pandas, Scikit-Learn

Suwon, Korea

- Mentored **6 Samsung employees** in applying Python for real-world data analysis and automation tasks.
- Designed and delivered a comprehensive Python curriculum that enabled employees to independently conduct **data processing, visualization, and web scraping** for diverse automation projects.

Awards & Certifications

Korean Ministry of Science and ICT Award, KISIA Information Security Developer Hackathon

Aug. 2024

Seoul Business Agency Excellence Award, SeSAC Hackathon (Seoul x Google Korea)

Aug. 2024

Projects

AI-Powered Language Therapist | NestJS, Flask, PostgreSQL

Jul. 2024 - Dec. 2024

- Spearheaded the development of an **AI-based language therapy app for children with speech disorders**, resulting in a **6th place finish out of 96 teams at SeSAC Hackathon**.
- Implemented **backend services using Flask** and NestJS, focusing on **robust API development** to ensure smooth interactions between the server and client.

Malicious URL Detection Service | NestJS, Flask, AWS, PostgreSQL, CI/CD

Jul. 2024 - Oct. 2024

- Architected and implemented a scalable backend**, and developed a model aggregation system to combine outputs of three models, enhancing accuracy to **over 92%**
- Led a team to **1st place at KISIA Information Security Developer Hackathon**.

Technical Skills

Programming Languages: C/C++, Python, Java, Kotlin, R, SQL, TypeScript, JavaScript, HTML/CSS, Assembly

Frameworks: Next.js, NestJS, Vue.js, Flask, Tailwind, React, React Native

Tools: REST API, Scikit-Learn, Pandas, NumPy, Docker, Figma, Prisma, Git, Android Studio, Linux

Databases/Cloud: MySQL, PostgreSQL, AWS, Google Cloud Platform