# Sang Hyup Lee

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## EDUCATION

**Johns Hopkins University** Baltimore, Maryland
*Bachelor of Science* June 2026
GPA: 3.84/4.0
B.S. Computer Science, B.S. Applied Mathematics and Statistics

- Relevant course work (*= in progress): Gateway Computing: Java, Data Structures, Intermediate Programming, Computer System Fundamental, Artificial Intelligence, *Computer Networks, *Introduction to Algorithms, and *Databases.

## EXPERIENCE

**Software Engineering Intern** Seoul, South Korea
Samsung SDS June 2024 - August 2024

- Collaborated closely with the RPA Solutions team to implement advanced prompt engineering techniques, including Few Shot Prompting, Prompt Chaining, and Chain of Thought prompting using Python and LangChain with LLM models, resulting in a 10% increase in AI accuracy (from 60% to 70%).
- Created and curated 100 sample data sets for use as examples, improving model's applicability and training efficiency.
- Generated vectors from chunked data and applied cosine similarity search to enhance query augmentation, resulting in more accurate and relevant model responses.

**Software Developer Intern** Seoul, South Korea
Mintech July 2023 - August 2023

- Created a profile page in a mobile application utilizing the Flutter framework, allowing users to track and earn achievements based on an algorithm-driven exercise routine.
- Collaborated with the Physical Education and Computer Science Departments of Yonsei University, assisting in research to explore potential enhancements for post-colorectal cancer patients through implementation of structured exercise routines and advanced algorithm design.

**Research Assistant** Seoul, South Korea
Fluid Track July 2021 - August 2021

- Collaborated effectively with interdisciplinary teams at Yonsei University, facilitating clear communication between researchers, developers, and healthcare professionals to develop a health tracking application using Unity, making health monitoring for pediatric patients and parents more engaging and interactive.

## PROJECT

**RareTrades,** React | PostgreSQL | NodeJS July 2024 - Present

- Conceptualized, developed, and independently led the creation of a full-stack trading application using React, Express.js, and PostgreSQL, enabling users to trade and manage trading cards.
- Designed and implemented dynamic visualizations to display price ranges and market trends, enhancing user decision-making and engagement.
- Engineered and optimized a robust back-end architecture with Node.js and Express.js, ensuring efficient data retrieval and real-time updates for seamless user experience.

**Cache Simulation,** C++ November 2023 - December 2023

- Constructed a C++ cache simulator with configurable write-allocate, no-write-allocate, write-back, and write-through policies, incorporating FIFO ALU.
- Configured dynamic adjustment of cache parameters including block size, set associativity, and byte size.

## TECHNICAL SKILLS

Languages: Java | Python | C/ C++ | Rust | JavaScript | Unity | Dart | SQL
Frameworks: Next.js | React.js | Flutter | Node.js | Express.js