

Sanghyup Lee

(443) 257-7342 | slee548@jh.edu | linkedin.com | github.com | portfolio

EDUCATION

Johns Hopkins University

June 2026

Bachelor of Science in Computer Science, GPA: 3.84/4.0

Baltimore, Maryland

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

EXPERIENCE

Quest2Learn

September 2024 – Present

Frontend Developer

Baltimore, Maryland

- Developed virtual labs operating React and React 3 Fiber, integrating generative AI to create adaptive learning experiences and boost student engagement.
- Collaborated to pilot virtual labs with 400+ students at Johns Hopkins University and other institutions.
- Designed and animated interactive 3D models leveraging Three.js, catalyzing real-time simulations with responsive visuals, transforming virtual labs into engaging, immersive environments.

Delineo Disease Modeling

September 2024 – Present

Data Science Researcher

Baltimore, Maryland

- Leveraged SafeGraph data with NumPy and Pandas to model disease spread in rural areas of 3,000+ people.
- Implemented DBSCAN and K-means clustering to study movement across 1,700 households and 2,200 locations over 30 days.
- Partnered with World Health Organization, Ruvos, NTT Data, and AWS to scale a model into a global pandemic decision-support tool.

Samsung SDS

June 2024 – August 2024

Software Engineering Intern

Seoul, South Korea

- Applied Few-Shot Prompting, Prompt Chaining, and Chain of Thought prompting using Python and LangChain, raising AI chatbot response accuracy from 60% to 70%.
- Curated 200+ sample datasets for API and RPA integration, improving model training and increasing real-world applicability.
- Generated around 100 Hugging Face vector embeddings onto datasets and applied cosine similarity search, optimizing query augmentation accuracy.

Mintech

July 2023 – August 2023

Software Engineering Intern

Seoul, South Korea

- Designed a profile page in a mobile app operating on Flutter, enabling users to monitor progress, change settings, and earn 10+ achievements through exercise routines.
- Collaborated with Yonsei University's Physical Education and Computer Science departments to enhance post-colorectal cancer patient care through structured exercise routines.
- Optimized in algorithm design to improve exercise tracking and personalize routines for patient rehabilitation.

PROJECT

RareTrades | React, PostgreSQL, NodeJS

August 2024 – Present

- Conceptualized, developed, and spearheaded creation of a full-stack trading application incorporating React, Express.js, and PostgreSQL, supporting users to trade and manage trading cards.
- Integrated PostgreSQL by implementing API calls to import and manage over 1,000 card entries, streamlining data pipeline and ensuring accurate information handling.
- Engineered and optimized a robust back-end architecture with Node.js and Express.js, ensuring efficient data retrieval and real-time updates for a seamless user experience.

TECHNICAL SKILLS

Languages: Java, Python, C, C++, C#, Rust, JavaScript, Dart, SQL

Frameworks/Tools: React.js, Flutter, Node.js, Express.js, PyTorch, Unity, Git, Docker

Databases: MySQL, PostgreSQL