

Jaehoon Son

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Education

Swarthmore College | B.A in Computer Science & Math

Swarthmore, PA

GPA: 3.83/4.0

Expected Graduation Date: May 2027

Coursework: Intro to Computer Engineering, Data Structures & Algorithm, Advanced Algorithms, Compilers, Intro to Computer Systems, Software Engineering, Discrete Mathematics, Linear Algebra, Multi-variable Calculus,

Academic Activities: Swarthmore College Computer Society, Competitive Programming (ICPC), Tri-Co Hackathon Winner

Technical Skills

Languages: Python, C++, Java, C#, JavaScript, TypeScript, SQL

Frameworks/Tools: React, Angular, Spring, MySQL, Tailwind, Firebase, MongoDB, Oracle SQL, Git, Docker, AWS

Pipeline Specialties: Real-time data pipelines, query optimization, high-throughput systems, low-latency architecture

Experience

Carrier Global Corporation | Software Engineer Intern

May 2025 – Aug 2025

- Built an internal web tool with **Next.js** and **Microsoft SQL**—used by **200+ plant technicians and engineers**—to replace manual Excel workflows, cutting report-generation time from hours to seconds.
- Developed **2 low-latency data channels** that connects to 24 PLC rooms, **retrieving 30 GB/s of sensor data** in real time.
- Optimized complex MySQL queries and rewrote legacy SQL filters using modern techniques (CTEs, window functions, parameterized queries), **cutting average data-retrieval time by over 50%**.

BeeLine Reader | Software Engineer Intern

May 2024 – Aug 2024

- Developed high-performance website plugin using **Angular.js** and **Java**, boosting reading for 100,000+ users.
- Engineered highly customizable admin interface, driving a **35% increase in user engagement**.
- Developed plugin integration into Newspack, enabling system integration to over 300 Newspack-powered websites.
- Executed a comprehensive plugin overhaul, yielding **30% faster load times** and **50% less server usage**.
- Engineered an efficient flat-file database, **cutting cost for storage and retrieval by 15% per file**.

Bank of Saipan | Software Engineer Intern

May 2023 – Aug 2023

- Played a key role in the successful launch of a new credit card service, **increasing customer onboarding rate by 15%**.
- Developed and optimized backend services in **Java**, ensuring secure and efficient handling of sensitive financial data.
- Conducted rigorous testing using **Jira** to meet performance standards and achieve a 99.95% error-free deployment rate.

IT Student Associate | Swarthmore Information Technology Services

Sep 2023 – May 2025

- Collaborated with the SCCS to create a data transfer routes for student and course data, enabling enterprise-grade applications with **+20,000 monthly traffics** from community members for a course scheduler and student directory site.
- Provide hands-on support to 180+ faculty and 1500+ students services, resolving **95% of tickets on first contact**.
- Assisted in **server migration** projects involving purchases of on-site servers, initial setups, and software maintenance.

Projects

Sortify — [AI-Powered Waste Sorting Solution](#)

Dec 2023 – Apr 2024

- Spearheaded development for a backend using **Python** and **AI** to assist PA colleges to achieve sustainability goals.
- **Fine-tuned a Hugging Face's ResNet50 model** to improve accuracy in AI-powered waste identification.
- Engineered robust client-AI interface, delivering sub-100ms response times for instant waste identification.

CollegeBridger — [Source Code](#)

May 2023 – Present

- Spearheaded development for a course registration platform with **React.js** and **ASP.NET** for managing courses and research registrations for 4,500 students across 3 colleges, **handling 5,000+ transactions per semester**.
- Engineered a query-optimized REST API handling over 30,000 courses, **optimized data retrieval speed by 40%**.
- Developed a dynamic HTML-to-JSON/C# converter for course data, **accelerating data processing by 300%** and cut down manual data entry errors by 90%.