Soo Yeon Ahn

LinkedIn | Personal Website | GitHub

Education

University of Illinois Urbana-Champaign	Graduated May 2025

B.S. in Mathematics and Computer Science   GPA: 3.69/4.0

• Core Concepts: Data Structures & Algorithms (C++), System Programming (C), Database Systems
• Achievements: Graduated with Distinction in Math/CS (Department Honors); Dean's List (FA21, SP22)

University of Washington, Seattle	June 2021

Pre-Sciences (Transferred)

• Core Concepts: Object-Oriented Programming and Computer Science Fundamentals (Java)
• Achievements: Annual Dean's List (2020 - 2021)

Technical Skills

• Computer Languages: Python, C/C++, SQL (MySQL), Java, TypeScript
• Infrastructure & DevOps: Docker, Google Cloud Platform (GCP), Shell, Git
• Systems & AI: High-Throughput Systems, Data Modeling, LLM Integration, API Integration, Data Processing

Work Experience

Dassault Systèmes	Jul 2023 – Jan 2024

Software Engineer Intern   Daegu, Republic of Korea (On-Site)

• Drove end-to-end technical delivery of C++/COM modules for an application in a platform of 300K+ users
• Ensured memory safety by fixing existing memory leaks in legacy codebase and preventing new ones during integration
• Developed automated test scripts using shell to benchmark performance and verify system stability after feature updates, establishing a robust regression testing workflow
• Designed and integrated UI components using proprietary frameworks, demonstrating the ability to customize and develop on complex, specialized platforms

Projects

C++ Limit Order Book (Solo) GitHub	Completed December 2025

• Engineered a high-performance C++ matching engine capable of processing 930,000 events/second
• Optimized order lifecycle management using red-black trees (std::map) and FIFO queue (std::list)
• System reached 49.84% quantity fill rate under various probabilistic loads

Generative AI Prototype (Solo) GitHub	Completed September 2025

• Engineered a Generative AI web application using TypeScript and the OpenAI API
• Designed and iterated on system prompts to ensure the model delivers concise, relevant responses
• Built a secure identity management flow using Google OAuth 2.0

Maze Game (Solo) GitHub	Completed June 2025

• Built a dynamic web application that generates mazes with modern C++ based on dynamic user input
• Designed responsive interactive UI with HTML/CSS/JS to display maze visualization and the user solving the maze in the browser in real-time; served via a Crow web server
• Containerized the application using Docker and deployed to Google Cloud Platform (GCP)

Teaching & Leadership

Computer Science Department (UIUC)	Jan 2022 – May 2023

Course Assistant (Introduction to Computer Science II)   Urbana, IL

• Led weekly lab sessions (~30 students) on C++ fundamentals and data structure algorithms
• Assisted hands-on debugging and personalized mentoring during 4–6 hours of office hours weekly
• Supported students in developing coding projects and improving problem-solving techniques

Languages

• English (Fluent)   • Korean (Native)   • Mandarin Chinese (Intermediate / HSK Level 4)