Soo Yeon Ahn

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Personal Summary

Software engineer with C++ development experience at Dassault Systèmes, contributing to modules used by 300K+ users. Proficient in backend development with expanding frontend skills. Strong academic foundation in algorithms, systems, and databases. Passionate about building performant, user-centric software.

Technical Skills

- Computer Languages: C/C++, Python, JavaScript, Java, Haskell, MATLAB, Verilog, MIPS, HTML5, CSS3
- Libraries/Frameworks: OpenCV, Crow, COM, React, React Native, Express.js
- Databases: MySQL, MongoDB
- Version Control: Git (CLI), GitHub
- Other: Object-Oriented Programming, Test-Driven Development, Software Development Life Cycle

Education

University of Illinois Urbana-Champaign — Aug 2021 – May 2025
B.S. in Mathematics and Computer Science — GPA: 3.69/4.0
- Achievements: Distinction Math/CS (Department Honors); Fall 2021, Spring 2022 (Dean's List)

University of Washington, Seattle — Sep 2020 – May 2021
Pre-Sciences — GPA: 3.95/4.0
- Annual Dean's List: 2020 – 2021
- Transferred to UIUC after freshman year

Work Experience

Dassault Systèmes R&D Center — Jul 2023 – Jan 2024
Software Engineer Intern — Daegu, Republic of Korea (On-Site)
- Engineered and maintained C++/COM modules for DELMIA, part of a platform with 300K+ users
- Had full lifecycle ownership of a feature; managing development documentation, development, and regression testing before sending it to the QA team
- Designed and integrated UI components using proprietary frameworks to improve UX
- Collaborated with international teams on cross-border software solutions and code reviews

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

Projects

C++ Limit Order Book (Solo) GitHub — December 2025
- Engineered a low-latency matching engine in Modern C++ that handles 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
- Standardized build process using CMake to ensure compatibility and streamlined dependency management

Maze Game (Solo) GitHub — June 2025
- Built a dynamic maze game using Modern C++ and Prim's algorithm; deployed using Crow server
- Designed interactive UI with HTML/CSS/JS to display maze visualization in the browser in real-time
- Containerized application using Docker and an automated build pipeline using CMake

Languages

- English (Fluent)
- Korean (Native)