# Soo Yeon Ahn

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## Summary

Backend Software Engineer with experience in building high-performance, scalable systems. Proficient in C, C++, and Python, with a solid foundation in algorithms, systems programming, and database design. Passionate about data-driven engineering in high-impact environments. Fluent in English and Korean, limited Chinese (Mandarin) proficiency (HSK 4).

## Education

University of Illinois Urbana-Champaign — Aug 2021 – May 2025
*B.S. in Mathematics and Computer Science* — GPA: 3.7/4.0
- Dean's List: Fall 2021, Spring 2022
- Relevant Coursework: Algorithms, Data Structures, Database Systems, Computer Architecture, System Programming

University of Washington, Seattle — Sep 2020 – May 2021
*B.S. Biological and Physical Sciences (Pre-Sciences)* — GPA: 3.99/4.0
- Annual Dean's List: 2020 – 2021

## Work Experience

Dassault Systèmes — Jul 2023 – Jan 2024
*Software Engineer Intern* — Daegu, Republic of Korea
- Developed and maintained C++ and COM-based modules for 3D modeling software used by over 300,000 global organizations
- Designed intuitive UI components using proprietary frameworks, enhancing accessibility and usability
- Collaborated with international engineering teams, contributing to cross-border software development

## Teaching & Leadership

Private English Institution — Feb 2024 – Jul 2024
*English Instructor* — Seoul, Republic of Korea
- Taught English to primary and secondary school students, adapting curriculum to varied proficiency levels
- Built communication skills and developed instructional approaches for individualized learning

Computer Science Department (UIUC) — Jan 2022 – May 2023
*Course Assistant (Introduction to Computer Science II)* — Urbana, IL
- Led weekly discussion sessions (~30 students) on C++ fundamentals and data structure algorithms
- Provided hands-on debugging help and personalized mentoring during 4–6 hours of office hours weekly
- Supported students in developing coding projects and improving problem-solving techniques

## Projects

Optical Character Recognition (OCR) App (Team) — CS 222 (Fall 2022)
- Developed an OCR-based app using OpenCV and Pytesseract to extract and highlight user-specified text from images
- Enhanced recognition accuracy with custom image processing techniques

Movie Ratings Query (Team) — CS 411 (Summer 2022)
- Implemented a webpage that could query movie ratings using Google Cloud and MySQL
- Included processes like importing movie ratings and processing ratings to make the data easy to query
- Webpage development included front-end technologies such as HTML, CSS, and JavaScript

Web Page Ranking Algorithm (Team) — CS 225 (Spring 2022)
- Implemented a PageRank-style algorithm using graph structures and priority queues to rank web pages by keyword relevance
- Optimized traversal and ranking for performance and scalability

Image Processing Application (Team) — CS 128 (Fall 2021)
- Built a tool to apply color filters (Redscale, Greyscale, Bluescale, Greenscale) and a mosaic blur using matrix transformations
- Demonstrated understanding of basic graphics programming and filter composition

## Technical Skills

Languages (Ordered in Proficiency) — C++, C, Python, Java, Haskell, MATLAB, Verilog, JavaScript
Tools & Technologies — OpenCV, Pytesseract, Git, VSCode, COM, MongoDB, MySQL
Concepts — OOP, FP, SDLC, TDD, Multithreading & Concurrency, Version Control (Git)