

## 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 engineering in high-impact environments. Fluent in English, native in Korean, intermediate Mandarin proficiency (HSK 4).

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## 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

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## 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

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## 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

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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

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## 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

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## 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)