

COLLIN JUNG

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TECHNICAL SKILLS

- Languages:
 - Python
 - Java
 - Javascript
 - C/C++
 - Wolfram Language
 - HTML/CSS
- Software:
 - Blender
 - Arduino
 - Unity
 - Mathematica
 - Microsoft Office
- OS:
 - Windows, Mac, Linux
- Fluency in Korean and English

SOFT SKILLS

- Coding and debugging
- Software Development Life Cycle (SDLC)
- Source code review
- Algorithms and data structures

PROFESSIONAL SUMMARY

Motivated and hardworking student completing a Computer Science bachelor's degree with a focus in Artificial Intelligence at Stanford University. Bright critical thinker with proven talent for learning quickly in a results-oriented environment, with 5 years of experience in a professional company work setting learning from veterans of the field.

EDUCATION

Stanford University Stanford, CA • Class of 2025 • 3.7 GPA

Bachelor of Science: Computer Science (Artificial Intelligence)

Relevant Coursework:

- **Systems:** Computer Organization and Systems (CS 107) / Operating Systems Principles (CS 111)
- **Security:** Intro to Cryptography (CS 255) / Intro to Cybersecurity (INTLPOL 268)
- **Depth:** How to Make VR (CS 11SI) / From Languages to Information (CS 124) / Intro to Computer Graphics and Imaging (CS 148) / Ethics, Public Policy, and Technological Change (CS 182) / Software Techniques for Emergent Hardware Platforms (CS 349H)
- **Math:** Mathematical Foundations of Computing (CS 103) / Computational Logic (CS 157) / Linear Algebra, Multivariable Calculus, and Modern Applications (MATH 51) / Intro to Probability for Computer Scientists (CS 109)

WORK HISTORY

Wolfram Research - Software Developer Intern

Champaign, IL • 05/2018 - 05/2023

- **Extended functionality** of the Wolfram Language working closely with Kernel developers
- Prototyped **physics simulation of rigid-bodies** by combining the Wolfram language with external game physics engines
- Contributed to the **Wolfram Physics AR/VR applications** project with UI/UX design
- Developed graphing system functions related to constraint embedding and graph drawing
- Analyzed and created **visualizations for graph data** in the Wolfram Data Repository
- Established compatibility between the Mathematica interface and the Unity game engine

PROJECTS

Movie Recommending Chat Bot - Winter 2023

- Created a chatbot using **Python** that stores user ratings of movies and uses item-item collaborative filtering to recommend similar movies.

Encrypted Chat Client - Winter 2023

- Implemented an encrypted chat client in **Javascript** using the Double Ratchet Algorithm that ensures forward secrecy and break-in recovery.

Probability-Based Playlist Shuffler - Autumn 2022

- Created a music shuffling algorithm using **Python** that prioritizes less commonly played songs within a playlist using Bayes' theorem and probability analysis.

Operating System Shell - Spring 2022

- Developed sophisticated shell in **C++** that utilizes multiprocessing using fork, execvp, and waitpid system calls to handle multiple executable commands.

Heap Allocator - Winter 2022

- Implemented efficient implicit and explicit heap allocators in **C++** with malloc, realloc, and free functionality. Used gdb and Valgrind to track and manage allocated memory blocks.