Sarah Chun

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SUMMARY

Inquisitive third-year CS undergraduate at UC San Diego seeking a summer or full year internship in software development or technology related fields. Interested in web development, cloud computing, and embedded systems.

EDUCATION

B.S. Computer Science – University of California, San Diego | *GPA 3.87/4.0* June 2026

ACADEMIC PROJECTS

Research Assistant for Network Simulator Bridge (NSB) at UCSC February 2024 - August 2024

- Worked with a team of graduate students to expand development on existing project code that connected Python applications to the Omnet++ network simulator to enable language-agnostic and platform-agnostic communication.
- Researched RabbitMQ to replace Python sockets and implement a more scalable message queuing system and incorporated Protobuf for object serialization.
- Helped onboard two new undergraduates.

Computer Systems Design January 2023 - December 2024

- Built a multithreaded HTTP server in C that listens on a specified port number for client connections and stores the HTTP requests in a bounded buffer for synchronized threads to process. The server parses and handles HTTP PUT and HTTP GET requests while using Reader-Writer Locks to ensure files are accessed by either being written by one writer or read by multiple readers at a time.
- Generated Schmidt-Samoa Public and Private keys for encryption and decryption of data using number theory.
- Implemented simplified allocation and free functions in C. The vmalloc function calculates the allocation size of user requested memory and writes headers to manage the heap while the vfree function coalesces an allocated memory block with neighboring free blocks by using footers to traverse backwards through the heap.

Game Design April 2022 - August 2022

- Coded an interactive Tic-Tac-Toe game in Python with an AI opponent that used a recursive minimax algorithm to calculate all possible outcomes and pick the best move.
- Simulated the zero-player Game of Life using the Ncurses library and user-defined structs in C. Cells live or die within a struct called Universe according to a set of rules, and the terminal is animated to reflect the changes.

Social Media Web Development (Google Firebase, JavaScript React, HTML, and CSS) February 2022

- Hosted a dynamic website where users could post messages to be stored in the database and displayed on the website; users used hyperlinks to navigate between different pages.

SKILLS

C, C++, Java, Python, Git, GNU Make, and Vim

RELEVANT COURSEWORK

Computer Architecture, Computer Networking, Machine Learning, Data Structures and Algorithms, Discrete Mathematics, Electricity and Magnetism, Computational Models, Assembly Language

WORK EXPERIENCE

Starbucks Barista July 2021 - January 2022

Bintang Badminton Summer Camp Assistant Coach July 2022

UCSC Badminton Club Treasurer September 2023 - June 2024

UCSC Group Tutor for CSE80 Intro to Networking and the Internet March 2024 - June 2024