Sawyer Rice

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Education

Bachelor of Science in Computer Science at **UCSB**, Graduating in June 2026 **(GPA: 4.0)**

- Member of UCSB College of Engineering Honors Program
- Achieved Dean's Honors List every quarter at UCSB
- Coursework in data structures and algorithms, web and mobile app development, artificial intelligence, computer vision, embedded systems, linear algebra, multivariable calculus, statistics
- Member of UCSB Men's Club Soccer Team

Work Experience

Front Desk Associate, UCSB Veterans Resource Center **Sept 2022 - present**

Operate without supervision as the primary point of contact for United States Armed Forces Veterans to inquire about the educational benefits awarded to them and their loved ones. Answer phone calls, field in-person questions, and maintain an honorable image for the resource center.

Projects

Chromatic Tuner **November 2024 - December 2024**

- Produced robust and accurate chromatic tuner written in Embedded C
- All input data collected from FPGA microphone is fed through an optimized FFT algorithm to convert data to frequency values
- Tuner displays note, octave, frequency, histogram, and spectrogram of input signal on LCD display
- Controlled by button and rotary encoder peripherals capable of steering tuner functionality and display writes
- Powered under the hood by a hierarchical state machine written with QP-nano framework

Path Finding Agent **December 2024**

- Implemented a path finding algorithm to create an intelligent agent capable of traversing a complex 2 dimensional plane filled with obstacles and rewards
- Algorithm is a depth limited breadth first search, expanding in concentric layers from the starting point and searching for optimal paths towards a goal state
- Developed an accurate and computationally efficient heuristic to estimate costs of paths not ending in a goal state

Atmosphere **June 2024 - August 2024**

- Worked effectively within group of 3 peers to produce entry into Gemini API Developer Competition
- Developed immersive audiobook generator powered by Gemini API and BBC Sounds Effects API
- Standard audiobook input mp3 file is returned with ambient audio overlaid in targeted scenes
- Required extensive prompt engineering to acquire valuable responses from Gemini

Gym Buddy **September 2024 - December 2024**

- Cross platform weightlifting mobile application built with a React Native and Typescript frontend
- Social media platform complete with ability to create an account, make public posts, and add friends
- Powered by a Firebase Firestore NoSQL database
- Developed within Agile format to ensure effective communication and high productivity

Skills

- C++, C, Embedded C, Python, Java, R, SQL, HTML, CSS, MIPS Assembly Language
- Experience with React, React Native, Spring Boot, and Django frameworks
- Developing in a group setting, merging branches, code review, kanban board management
- Well versed in Git and Unix commands, comfortable developing in terminal