Connor Auyong

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Education

University of California, Irvine Irvine, CA

Bachelor of Science in Computer Science and Engineering *Expected 2026*

- Major GPA: 3.6
- Relevant Coursework: Data Structures and Algorithms, Digital Systems, Embedded Software, Differential Equations, Computer Organization, Operating Systems, Database Management, Design & Analysis of Algorithms, Intro to AI

Experience

Research Intern June 2025 – August 2025

NIWC Pacific *San Diego, CA*

- Resolved deep integration issues between the ROCK robotics framework and the AprilTag library, identifying mismatched build targets and incorrect include/link paths. Replaced a broken upstream module with a custom-built version, enabling full system deployment

STEM Center Tutor August 2023 – January 2024

Mount San Antonio College *Walnut, CA*

- Helped five dedicated students three times a week with the foundations of Computer Science that emphasized strong foundations and good code formatting techniques.
- Guided students through debugging strategies and project-based learning, improving problem-solving abilities.

Projects

Smart Textbook | *TypeScript, React, Python, Flask, ElevenLabs/OpenAI API* April 2025 – Present

- Architected an intelligent PDF reader leveraging GPT-4 for dynamic text summarization and Q&A, implementing efficient context windowing and prompt engineering to reduce token consumption by 40%.
- Developed a real-time text-to-speech system with synchronized text highlighting, integrating ElevenLabs API for natural voice synthesis and achieving 98% text-audio alignment accuracy.
- Built a scalable Flask backend handling concurrent PDF processing and LLM interactions, with robust error handling and rate limiting, supporting documents up to 100MB with sub-second responses.

Embedded Software | *C, ATMega32, Atmel-ICE* April 2024 – June 2024

- Designed and implemented firmware for embedded systems, optimizing performance and enabling real-time interactions with LCD, keypad, and speaker components.
- Designed and implemented an alarm clock with keypad, LCD, and speaker integration.
- Created an innovative 2D side-scrolling game, integrating LCD, keypad, and speaker components. The game increased user interaction through dynamic obstacles and real-time sound effects.

PDF Listen App | *SwiftUI, Core Data, PDFKit, AVFoundation* Nov 2024 – Present

- Designed and implemented an iOS application using SwiftUI, enabling users to import, view, and listen to PDF content with seamless integration of PDFKit and AVFoundation for text-to-speech functionality.
- Leveraged Core Data for persistent data storage, enabling users to store and manage imported PDF documents across sessions, integrating directly with SwiftUI's environment.

EXTRACURRICULARS

Healthcare Cost Analysis | *Data Club at UCI* Jan 2025 - Mar 2025

- Uncovered hidden cost imbalances in HMO plans by applying multi-stage anomaly detection, revealing disproportionate Rx expenses for Non-SNP members.
- Identified 4,800 initial outliers using Interquartile Range (IQR) filtering, then refined detection with Local Outlier Factor (LOF) and Isolation Forest to isolate 500 high-confidence anomalies, improving interpretability and decision-making.

Technical Skills

Certifications: AWS Certified Cloud Practitioner (Aug 2024 - Aug 2027)
Languages: C++, C, LaTeX, Swift, HTML/CSS/JavaScript, Java, Python, Verilog, R, MySQL, Lisp, ProLog
Developer Tools: Linux, Git, Docker **Libraries**: pandas, NumPy, Matplotlib, Seaborn, Scikit-Learn