Alex Herman

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Education

California State Polytechnic University, San Luis Obispo
Bachelor of Science in <u>Computer Engineering</u>

- ★ **Expected Graduation:** June 2026
- ★ **GPA:** 3.58
- ★ **Relevant Coursework:** Microcontrollers and Embedded Systems, Computer Design and Assembly Language, Data Structures, Digital Signals and Systems, Systems Programming

Technical Experience and Projects

BeatBox: A Terminal-Based GarageBand-style Music Maker | *Fall 2024*
Individual Final Design Project
Technologies: C, STM32CubeIDE, UART, PWM, Circuit Design, Technical Reports

- ★ Fully designed, in stages, a circuit and program for use on an STM32-Nucleo board that allowed a user to create songs by selecting notes in the terminal, which could then be saved and played by a speaker and servo (configurable drum kit) that were wired to the board.
- ★ An in-terminal ASCII display allowed note timing changes, key adjustment, and drum configuration.

Prototype Vehicle Lab (PROVE) | *Fall 2023 – Spring 2024*
Interface Designer and Low-Voltage Business Liaison
Technologies: C, Android Studio, Git

- ★ Designed and implemented a user-friendly tablet interface for driver interaction in a battery-powered vehicle that implemented a UART-to-tablet data transfer protocol with custom packet structure.
- ★ Acted as the primary point of contact between the technical and business teams, streamlining cross-functional collaboration.

Leadership and Extracurricular Activities

Ultimate Frisbee Team Captain | *Fall 2022 – Present*

- ★ Achieved A-team placement as a freshman, demonstrating exceptional athletic and team skills.
- ★ Elected captain of the B-team, balancing leadership responsibilities with academic priorities.
- ★ Coordinated meetings, planned tournaments, secured funding, and created strategic practice drills.
- ★ Currently designing and hosting a website for team organization and communication.

Ocean Lifeguard – City of Santa Cruz Fire Department | *Summer 2021 – Present*
Beach Lifeguard I, Junior Guard Instructor

- ★ Ensured beach safety through vigilant water monitoring, rescues, and proactive public engagement.
- ★ Trained and mentored Junior Guard participants, fostering leadership and water safety skills among youth.
- ★ Coordinated instructional activities and managed volunteer and staff schedules.

Technical Skills

Programming Languages: C, Verilog, Python, RISC-V Assembly, Java
Software Tools: LTSPICE, Fusion 360, Vivado, Matlab, Android Studio, STM32CubeIDE
Languages: Spanish (Conversational)
Certifications: CPR and Title 22 First Aid, Cal Poly Emerging Leaders Certificate

Interests: Rock Climbing | Cooking | Botany | 90s Hip Hop | Watercolor