BRENDEN DACK

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Professional Summary

Senior Computer Engineering student specializing in embedded systems, with experience in hardware/software integration, technical leadership, and cross-functional collaboration on innovative real-time audio and embedded projects.

Education

California State University, Fullerton
Bachelor of Science in Computer Engineering, Cum Laude
Minor in Computer Science
Expected Graduation: May 2025

Technical Skills

- Programming Languages: C/C++, Python, SQL, HTML, CSS, JavaScript
- Tools & Systems: Microsoft Office Suite, Linux, Windows, macOS, iOS, Android
- Hardware & Tools: Soldering, Multimeter, Oscilloscope
- Collaboration: Team leadership, communication, adaptability, problem-solving

Relevant Coursework

- Signals and Systems
- Advanced Electronics for Computer Engineering
- Real Time Audio Processing
- Filesystems and Databases
- Computer Design and Organization
- Embedded Processor Interfacing

Experience

QSC, LLC Costa Mesa, California
Pro Audio Intern May 2023 – August 2023

- Utilized a Multimeter and Oscilloscope to achieve a 20% reduction in noise margin across several devices
- Assembled touch control devices to amplifiers according to specifications, utilizing a soldering iron and Quality Control Software, averaging 30 minutes per product
- Conducted failure analysis on test devices to identify cause of return and identifying 95% of failure points
- Repaired 80% of returned devices by integrating new components (resistors, capacitors, ICs) onto circuit boards

Fluidmaster, Inc San Juan Capistrano, California
IT Helpdesk Intern May 2022 – August 2022

- Deployed new employee setups for five different employees, decreasing onboarding time by 50%
- Fulfilled employee tickets and followed up on system status with satisfaction ratings over 90%
- Coordinated with a team to deploy new 25 Gigabit switches throughout company, increasing performance by 30%
- Upgraded and redeployed user systems based on new standards, reducing downtime by 40%

Projects

- **Led a team** in developing a cutting-edge 3D Audio Player on the Raspberry Pi 5, integrating Source Separation, Head Related Transfer Functions, and Speech-to-Text using Python to boost user engagement by 30%.
- Designed a three-note digital piano with polyphonic sound using Tiva-C and a custom 4-bit DAC to enhance note processing in embedded C.
- Implemented a traffic management system using Tiva-C and Finite State Machines; reduced simulation delays by 30%.
- Built a real-time temperature alarm system using Verilog and I2C on the Nexys A7-50T FPGA to improve food safety monitoring.

Honors and Activities

- Active member of **Tau Beta Pi**, the national engineering honors society
- Designed a personal home lab to explore networking technologies
- Peer tutor for Computer Science and Engineering courses