Braidyn Sheffield

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EDUCATION

University of Denver, Denver, CO **Expected: June 2026**

Major: BS in Computer Engineering
Minor: Mathematics, Computer Science
GPA: 3.83 / 4.00
Accomplishments: Dean's List (Spring 2023, Autumn 2023, Winter 2024, Spring 2024, Autumn 2024, Winter 2025)
Related Coursework: Computer & Digital Design, Computer Programming Series, Electrical Circuit Analysis Series, Signals and Systems Analysis and Design, Computer Aided Machine Design, Digital Circuit Systems & Architecture.

SKILLS

Technical Skills: Microcontrollers (Arduino, Teensy), FPGA (Quartus), PCB Design, Circuit Analysis, Soldering, Serial Communication (UART, SPI, I2C), Git/GitHub, 3D Printing, LabVIEW, SOLIDWORKS, Autodesk.
Programming Languages: C, C++ (Arduino, Embedded C), Python, Verilog, MATLAB

PROJECTS

Digital Thermometer Design – Team of One **Jan 2025 – February 2025**

- Studied an existing digital thermometer to analyze its features and functionality, then developed block diagrams and software flowcharts to guide our design.
- Created a detailed circuit schematic, selected components for accurate temperature measurement, and designed a custom PCB as a bridge for an Arduino Uno, enabling seamless integration with sensors and display components.
- Ordered and soldered components onto the PCB, ensuring proper connections and verifying electrical functionality before full system integration.
- Programmed the firmware in C, tested sensor data acquisition and display output, and performed debugging to optimize accuracy and system reliability.

EKG Circuit Design Project – Team of Two **May 2024 - June 2024**

- Conducted in-depth research on electrocardiography fundamentals and analyzed EKG waveform components (P wave, QRS complex, T wave) to understand their clinical significance for diagnosing cardiac conditions.
- Investigated analog and digital methods for EKG construction, assessing design precision, cost, and complexity. Selected and tested components like electrodes, amplifiers, and filters to enhance signal quality and assessed design trade-offs for real-world application.
- Designed and built the EKG circuit using optimal components for accurate heart monitoring. Conducted extensive testing to ensure reliability, compared outputs with benchmarks, and iteratively refined the design for improved functionality.
- Authored a detailed technical report on the EKG project, encapsulating the research, design choices, and performance evaluations, showcasing thorough understanding and expertise.

PROFESSIONAL EXPERIENCE

Entrepreneurship Garage, Denver CO – *Managing Technical Assistant* ***January 2023 - Present***

- Conducted 10+ workshops to instruct university business students in the fundamentals of utilizing and designing circuits with Arduino technology.
- Guided and supported 200+ students in translating their business concepts into prototypes. Facilitated the creation of 40+ prototypes through either CAD design and 3D printing or the implementation of Arduino to develop functional circuits for their ideas.
- Lead the organization and coordination of workshops at the Entrepreneurship Garage, ensuring meticulous planning and seamless execution.

US Navy, Atsugi Japan – *Aviation Electronics Technician* ***July 2017 – May 2021***

- Second Class Petty Officer, Air Warfare Designated, qualified Avionics Technician with 3+ years of experience of problem solving, decision making, critical thinking and in depth troubleshooting of complex avionic systems
- Applied knowledge of complex avionics systems to perform maintenance and repair issues that surfaced which resulted in having multiple fully mission capable aircraft to meet the required mission and over 3000+ maintenance actions with 550 mishap-free flight hours