TYLER WEBSTER

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EDUCATION

Carnegie Mellon University, Pittsburgh PA — Expected August 2024

- Master of Human Computer Interaction

James Madison University, Harrisonburg VA, 3.45/4.0 GPA

- Bachelor of Science – Engineering, ABET accredited program
- Chipman Merit Scholarship Recipient

SKILLS

C/C++	Python	FreeRTOS	Linux	GitHub	Scripting
Embedded Systems	Networking	PCB Design	Lab Equipment	SolidWorks	ReactJS

WORK EXPERIENCE

Electrical Design Engineer

DLB Associates – Remote — June 2022 – June 2023

- Generated and reviewed electrical design drawings for high value mission critical data-center projects
- Conducted site visits and managed construction administration processes with external contractors and clients
- Collaborated completely remotely with a 20+ person team and external stakeholders

Product Development Engineering Intern

Trek Bicycle Corporation – Waterloo, WI — May 2021 - August 2021

- Researched and developed procedure, software, and electronics to evaluate developmental electric bicycles
- Produced test results responsible for triggering development of new internal standards for e-bike motors
- Managed 30+ person user study collecting anatomical data, optimizing bicycle fit geometry
- Created formal test plans for evaluation of bicycle components

Undergraduate Research Assistant: Human Computer Interactions / Computer Engineering

James Madison University – Harrisonburg, VA — August 2019 - May 2022

- Constructed a wearable computing device for the purpose of exploring the use of haptic feed-forwarding
- Generated PCB, software, and algorithms to automate wireless haptic feedback system
- Developed, programmed, tested and debugged embedded system software
- Created system prototypes and conducted pre-study to assess device performance

Engineering Intern

Eniware, Portable Sterilization – Bethesda, MD — May 2017 - July 2017

- Generated prototype renderings for presentation and display
- Cooperated with lead engineer to develop a portable surgical equipment sterilizer
- Collaborated with chemists to optimize internal layout for sterilization processes

PROJECT EXPERIENCE

Generative AI Skill Evaluation System *(Capstone Project)*

- Managed creation of a simulated learning exercise to test user perceptions of AI generated skill insights based on user performance
- Developed a backend API to receive user inputs and return OpenAI generated skill evaluations

Embedded Systems for Precision Agriculture *(Capstone Project)*

- Lead hardware and firmware development of a distributed AI driven sensor network for agricultural applications
- Partnered with front and back-end engineers to ensure data consistency and integrity
- Maintained relationship with client and developed system around client needs

Real-Time Heart Rate Detection and Tracking Device *(Independent Study)*

- Created device to read and output ECG data from the user
- Developed Arduino and Python software to log and process data in real-time
- Achieved 95% accuracy in heart rate calculations when compared to off the shelf pulse oximeters.

Custom Bluetooth Guitar Hero Controller *(Independent Project)*

- Created a complete controller including mechanical, electrical and software systems
- Tested and iterated designs based on user testing

Adaptive Human Powered Vehicle *(Curriculum Project)*

- Created proof of concepts to test systems within the vehicle
- Utilized MATLAB to perform stress and weight distribution analysis of vehicle
- Developed comprehensive bill of materials for completed design