TYLER WEBSTER

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EDUCATION

Carnegie Mellon University, Pittsburgh PA
- Master of Human Computer Interaction

James Madison University, Harrisonburg VA
- Bachelor of Science – Engineering, ABET accredited program
- Chipman Merit Scholarship Recipient

SKILLS

Project Management	Product Design	Product Development	Hardware Development	Prototyping	Figma
HTML/CSS	ReactJS	Python	C/C++	Javascript	IoT

WORK EXPERIENCE

Electrical Design Engineer
DLB Associates – Remote — June 2022 – June 2023
- Designed and reviewed electrical system models for new construction and fit out data-center projects
- Conducted load, short circuit, voltage drop, duct bank calculations, breaker coordination studies, etc.
- Led site visits and managed construction administration processes with external contractors and clients
- Collaborated 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 Interaction / Computer Engineering
James Madison University – Harrisonburg, VA — August 2019 - May 2022
- Engineered 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

MARi AI *(Capstone Project)*
- Programmed AI-driven interfaces to test personalized learning tools and gather user feedback
- Conducted user interviews and testing to gather insights on user experience, refining designs based on feedback
- Developed and iterated prototypes focused on attribute visualization and goal-setting features

Embedded Systems for Precision Agriculture *(Capstone Project)*
- Led the development of hardware and firmware for a distributed AI-driven sensor network, optimizing it for agricultural applications
- Partnered with front and back-end engineers to ensure data consistency and integrity
- Designed, iterated, and implemented the system, incorporating client needs and feedback throughout the project

Real-Time Step Counting Device and Algorithm *(Independent Study)*
- Created a custom SPI driver for ADXL345 accelerometer
- Developed and Optimized C++ software to conduct real-time signal processing and step counting on device
- Achieved 95% accuracy in step count calculations when compared to off the pedometers

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