TYLER WEBSTER

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EDUCATION

Carnegie Mellon University, Pittsburgh PA — Expected August 2024

- Masters 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	Shell Scripts
Embedded Systems	TCP/IP	PCB Design	Lab Equipment	Solidworks	Agile Development

WORK EXPERIENCE

Electrical Design Engineer

DLB Associates – Remote — June 2022 – June 2023

- Generate and review electrical design drawings for mission critical data-center projects
- Conduct site visits and manage construction administration processes with external contractors and clients
- Collaborate completely remotely with internal and external parties

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 the development of new internal standards for e-bike motors
- Managed user studies collecting anatomical data for the purpose of 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

- Produced a wearable computing device for the purpose of exploring the use of haptic feedforwarding
- Produced 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
- Assisted lead engineer to develop a portable surgical equipment sterilizer
- Collaborated with chemists to optimize internal layout for sterilization processes

ENGINEERING PROJECT EXPERIENCE

Embedded Systems for Precision Agriculture *(Capstone Project)*

- Lead hardware and firmware development of distributed sensor network for agricultural applications
- Collaborated 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

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

Titanium Bicycle Stem *(Independent Project)*

- Utilized Solidworks to develop and refine custom bicycle stem manufactured in laser sintered titanium
- Iterated and tested designs with data collected from FEA, prototypes, and feedback from manufacturer

Bicycle Tire Lever *(Independent Project)*

- Developed several iterations of a simple bicycle tool within Solidworks based on FEA results and user feedback
- Assessed multiple quotes to generate production cost analysis comparing different manufacturers and materials