Zane Dunnings

University of Michigan – Computer Engineering

About

1200 Orchard Ridgge Rd
Bloomfield Hills, MI 48304

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Github: zldunn
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Skills

Proficient:
C/C++, Python, MATLAB

Familiar:
Java, Verilog,
JavaScript, HTML/CSS

Arduino
Raspberry Pi
Altera – FPGA
Particle Photon

React
Node.js

Organizations

Member - National Society of Black Engineers (NSBE)

Project Lead - M-HEAL

Mentor - Peer Mentorship Program

Coursework

Data Structures
Algorithms
Machine Learning
Computer Architecture
Digital Logic Design
Power Circuits
Signal Processing
Embedded Controls

Awards

Power Scholar Award
Dean's List
FIRST Robotics World Finalist

Education

2014 – 2019 **University of Michigan – Ann Arbor** GPA: 3.50/4.00
B.S.E. Computer Engineering
Minor: Entrepreneurship

Experience

5/17 – Pres **Workday, Inc** *Software Engineering Intern*
Pleasanton, CA

- Implementing redesigned HR recruiting application using proprietary Application Development Language

5/16 – 8/16 **Stryker Endoscopy** *Manufacturing Technology Engineering Intern*
San Jose, CA

- Automated manufacturing of surgical cameras using PLC and Arduino
- Designed and implemented all-in-one safety switches for fixtures using purely solid state logic, providing over $70,000 in risk savings

11/16 – Pres **Arc Innovations, LLC** *Co-Founder / CEO*
Ann Arbor, MI

- Founded organization aimed at advancing the current state of technology in non- engineering research labs
- Develop custom software and hardware devices for various research labs

9/14 – Pres **The Clear Lung Project** *Software Development Lead*
Ann Arbor, MI

- Utilizing digital signal processing and machine learning to create a "smart stethoscope" to diagnose childhood pneumonia in low resource areas
- Implemented classification models to identify key sound features of pneumonia, such as crackles, wheezing and rales

2/15 – 12/16 **University of Michigan, MCDB** *Test Equipment Engineer*
Ann Arbor, MI

- Designed and Implemented Arduino-based automated test equipment for developmental neural stimulation experiments
- Co-authored research paper [*Sensory experience shapes development of the nociceptive circuit in Drosophila*]

Projects

Intelligent Barbell Clip - C, Node.js, JavaScript
Developed hardware and software for IOT bench bar clip that tracks the number and intensity of repetitions. Then sends data to node.js server where data is tracked and visualized.

Automated Optogenetics Stimulation Equipment – C, Arduino
Invented automated light stimulation device for developmental neuroscience experiments. Used PID control system to accurately control light intensity of stimulation.

Wearable Stun Gun – Ross Social Challenge – First Place
Designed Circuit board and CAD models for a wearable stun gun aimed for women in India. Collaborated with team from Ross School of Business

Larva Video Tracking – Python
Utilized OpenCV to develop program to track the crawling distance and speed of fruit fly larvae for neuroscience experiments.