PHILLIP RING

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Objective

- Senior seeking internship for summer before grad school

Education

UNIVERSITY OF MICHIGAN **Ann Arbor, MI**
BSE Computer Engineering, 3.64/4.00 Fall 2013- April 2017

Work Experience

UNIVERSITY OF MICHIGAN **Ann Arbor, MI**
Instructional Aide, Intro Logic Design Fall 2016-Present

- Teach and coordinate two weekly lab-based sections using Altera DE2-115
- Help students with Quartus application software, IoT/embedded projects, FPGA interfacing

HEWLETT PACKARD ENTERPRISE **Pontiac, MI**
Software Engineer Intern Summer 2016

- Successfully developed a monitoring tool for site migrations from Microsoft Sharepoint to Office 365
- Constructed multithreaded web service backend and UI frontend
- Increased productivity by 3 minutes per migration instance check, avg 100 instances per migration

UNIVERSITY OF MICHIGAN **Ann Arbor, MI**
Research Assistant, Automotive Lab Summer 2016

- Built software UI prototype for direct fuel injector spray detection and measurement
- Investigated, ran tests on communication interface and breakout boards for fuel injector, pump valve

TRAM, INC **Plymouth, MI**
Test Engineer Intern Summer 2015

- Programmed macros to analyze, manipulate, and graph test data; used VBA and Microsoft Excel
- Facilitated testing of automotive switches and parts in accordance with customer specifications
- Improved design of switch internals, electronics and electromechanics, led to lower failure rates by 20%

Project Experience

ADV EMBEDDED SYSTEMS - FLEX ZONE WEARABLE FITNESS TRACKER

- Constructed EMG(electro-muscular)-based tracker to provide feedback on workout form
- Devised DSP algorithms for EMG signal filtering, incorporating Bluetooth Low Energy streaming from RT **Operating System** to Android mobile app
- Designed custom PCB with analog/digital components, antenna/balun; dealt with board bring-up

EMBEDDED SYSTEMS - FINGER BEATZ WIRELESS MUSIC CREATOR

- Built wearable wireless glove controller for virtual sound distortion and physical drum interfaces

COMPUTER VISION - PHYSICAL PIANO TRANSCRIPTION

- Architected script to output musical score of piano key presses in real-time using Matlab, Python
- Used **Machine Learning** principles, such as SIFT, K-means to train algorithm on datasets

Involvement

HKN - ETA KAPPA NU (EECS HONOR SOCIETY) **Ann Arbor, MI**
Chapter Officer/Member Fall 2015-Present

MICHIGAN MARCHING BAND, HOCKEY BAND **Ann Arbor, MI**
Member Fall 2013-Winter 2016

Skills

- Experience with EAGLE CAD, oscilloscopes, power supplies/converters, multimeters
- Proficient Skills in C/C++, MATLAB, ARM ISA, Verilog, VHDL
- Experienced in Python, Java, VBA, bash scripting, Git/GitHub, OpenCV
- Experienced in Linux (OS, Device Drivers), FreeRTOS, TI RTOS/CC26xx architecture