CALEIGH CHONG

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EDUCATION:

University of Michigan, Ann Arbor, MI **Graduation Date: May 2016**
B.S.E. Electrical Engineering

Shanghai JiaoTong University, Shanghai, China **Summer 2014**
International Programs in Engineering Study Abroad

WORK EXPERIENCE:

ASM Pacific Technology Singapore – Intern **June 2015 – Aug 2015**

- Collaborated with the motion team that consists of 25 people to add functions to semiconductor packaging equipment
- Developed VHDL modules to control and read back the speed of fans using pulse width modulation to help develop a controllable cooling instrument
- Designed a module to interface between an ADC and other FPGA modules to allow the analog data to be used throughout the rest of the system
- Utilized C++ and MFC to create a program with a GUI to automatically test the entire functionality of a mass produced board

University Housing – Residential Advisor **Sept 2013 – Present**

- Facilitated community building within the residence halls by organizing events and providing access to different resources
- Provided support for a residence hall of 1300 first year students by managing administrative work and ensuring safety of the community
- Collaborated with a staff of 40 people to organize events for the residence hall and maintain the environment of the building

PROJECT EXPERIENCE:

EECS 373 – Embedded Systems Design and Implementation **Sept – Dec 2015**

- Designed a 2-person game where each person wirelessly controls a tank over a programmable LED playing grid and tries to deplete the opponents health by shooting them
- Position and orientation of tanks tracked with AprilTags using overhead camera and OpenCV and shots appear as lit up LEDs on a 29x30 LED matrix
- Configured a SmartFusion with ARM Cortex-M3 processor using Verilog to recognize GPIO button interrupts and write the data onto an APB bus to implement shooting and turret motion
- Using C, interpreted the raw ADC values from the joystick and button data from an APB bus into UART data to be sent to the tanks
- Wirelessly sent control data the SmartFusion read from the controllers to the tanks using UART and XBees
- Received and interpreted a polled string of UART data on an Arduino to control tank and turret motion
- https://www.youtube.com/watch?v=KKNLsc51gRI

3:8 Bit CMOS Decoder **Sept – Dec 2014**

- Utilized Cadence to design a 3:8 bit decoder out of transistors that minimizes the energy delay product
- Designed, tested and optimized the decoder under delay time and output transition time constraints
- Tested different types of CMOS logic in inverters and NAND gates to minimize energy consumption

RELEVANT COURSEWORK:

EECS 373 – Embedded Systems Design and Implementation
EECS 461 – Embedded Control Systems
EECS 452 – Digital Signal Processing Design Lab
EECS 281 – Data Structures and Algorithms

SKILLS:

Programming: *Proficient:* C/C++
Working Knowledge: Python, Matlab
Basic: HTML, CSS, JavaScript
Technical: Verilog, VHDL, ARM Assembly, Cadence, Arduino, Raspberry Pi
Languages: Survival Level Mandarin Chinese