

SUMMARY: Computer and Electrical Engineering graduate student with 3-years professional experience in hardware development. Skills in product development, printed circuit board design, firmware programming, and 3-D printing.

EDUCATION

MS Computer Engineering | Michigan Technological University | GPA: 3.9 | Expected May 2017

BS Electrical Engineering | University of Indonesia | May 2011

PROFESSIONAL HARDWARE ENGINEERING EXPERIENCE

Embedded Systems Engineer | PT. Prasimax Inovasi Teknologi | Jan 2012 – 2015

(Indonesian start-up focused on customer electronic design for corporate and industrial customers/applications)

Project: Designed and produced electronic device for collecting point-of-sales system data over cellular network or WIFI to help government enforce tax collection from current value added tax system.

- Designed microcontroller based electronic circuit for capturing point-of-sales data.
- Surveyed and contacted various electronic component suppliers to find suitable parts to meet design constraints.
- Designed printed circuit board layout.
- Collaborated with printed circuit board manufacturer regarding design and production cohesiveness.
- Supervised and inspected the quality during assembly of device in surface mount technology factory.

Project: Designed and produced electronic device to collect data from remote facilities and towers companies over cellular network.

- Met with client to identify specifications, budget, and deadline for project.
- Created and presented development proposal to client.
- Designed microcontroller based electronic circuit, firmware, and printed circuit board layout.
- Coordinated with electronic component suppliers and surface mount technology factory regarding design and manufacturing decisions.
- Performed field tests and analyzed results.

PROJECT EXPERIENCE

Embedded Systems Specialist (hardware team lead) | MTU Open Sustainability Technology Lab | May 2016 - Present

Project: Develop open source hardware for measurement of semiconductor sheet resistance using four-point probe technique to reduce process cost by up to 70% and demonstrate the benefit of open source hardware.

- Consulting materials science expert regarding physics of semiconductor measurement.
- Performing literature review to identify established techniques.
- Designing electronic circuit, Arduino firmware, and Java software for system.
- Incorporating existing open source hardware and software to speed up development: Arduino, Java WindowBuilderPro
- Testing various semiconductor films and existing four-point probe equipment to compare and validate operation.

CO-CURRICULAR INVOLVEMENT

Bob Mark Elevator Pitch Competition: Prepared for and practiced public speaking and networking skills.

Entrepreneurs Club: Student organization for aspiring entrepreneurs to meet, share ideas, and hear from established entrepreneurs. Also facilitates various events such as pitch competition, seminar, mentoring, etc.

IEEE Hackerspace: student organization providing students with space and equipment to work together on various projects, such as fixing broken 3-D printers.

Ridge Roamers: student run climbing club.

Make a Difference Day 2015 & 2016 - Volunteered to provide services on campus and to residents of local community.

TECHNICAL SKILLS

- Circuit Design
- PCB Layout
- RepRap 3-D Printer
- 3-D Model
- Microcontollers
- Power Electronics
- Arduino
- MATLAB
- Circuit CAD (KiCAD, Eagle, Altium)
- OpenSCAD
- FreeCAD
- MS Office