# BRIAN DANIELS

www.briandaniels.me

**Education**

**University of Michigan** - *Ann Arbor, MI* *December 2014*

- B.S.E. Computer Engineering
- GPA: 3.854/4.000
- Member of Eta Kappa Nu engineering honor society

**Courses**

**EECS473 –** *Advanced Embedded Systems* *Fall 2014*

- Created a bike helmet that featured a full Bluetooth headset, microphone, turn signals, headlight, tailight, and solar charging.
- Rapid prototyping technologies including CAD, 3D Printing, and Arudino development were used to create a fully functional prototype in two months.

**EECS 467** – *Autonomous Robotics* *Winter 2014*

- Studied computer vision, PID control algorithms, and path finding to control various robots, including a robotic arm and a wheeled robot.
- Created a human interface to control a robotic arm using a Kinect with a custom computer vision algorithm and control scheme with visual feedback.

**EECS 373** - *Design of Microprocessor Based Systems* *Fall 2013*

- Studied ARM/Thumb instruction set on an Actel SmartFusion FPGA and ARM Cortex-M3 development board, memory-mapped I/O, interrupts, and embedded system design.
- Created a wearable suit that interfaced with MIDI devices. Used ultrasonic distance sensors, piezo sensors, and accelerometers to create musical notes. Communicated wirelessly over XBee to send and receive MIDI notes.

**Experience**

**ARM** – *Austin, Tx* *Summer 2014, Present*

- Created and maintained tools that carried out large-scale testing and verification of ARM architecture implementations.
- Wrote reporting tools that monitored testing and alerted developers to problematic tests.

**Digital Roots** - *Northville, MI* *May 2013-May 2014*

- Used HTML5, CSS3, and JavaScript to create rich web applications with a focus on user experience and usability.
- Worked with modern JavaScript libraries and frameworks, including Ember.js, d3.js, Highcharts, jQuery, Twitter Bootstrap, and Foundation.

**Computer Skills**

**Languages**: C/C++, Java, Python, ARM Assembly, Verilog, MATLAB
**Web Development**: HTML5, CSS3, JavaScript, PHP, MYSQL, Apache, Node.js

**Personal Projects**

**Arduino Development** *Summer 2013*

Created a Bluetooth-controlled, wireless light display system.

- Used an Arduino Uno, a RGB LED strip, a Bluetooth serial module, and rechargeable Lithium-ion batteries. Colors and display modes are controlled via Bluetooth through an Android app.

**MHacks Hackathons**

- **Fall 2013** – Wrote a web application that helps physical therapists instruct their patients with textual instructions and 3D modeled visual aids.
- **Winter 2014** – Created a Node.js application that allows smartphones to be used as game controllers on a host Linux machine using only the phone's browser – no app install needed.