

Michael Hosue

skyetheguy.github.io

✉ mhosue@uwaterloo.ca
in ca.linkedin.com/in/michaelhosue
📞 1-519-781-9011
🏢 UWaterloo - 2A Mechatronics Engineer

SKILLS

C and C++

Control software development in side projects, hackathons and school.
Linux kernel analysis and modifications done in C on prior work term.

Java, HTML, CSS, JS, MySQL, XML, Tomcat, Cascade CMS

Added functionality to and maintained web application (tomcat with MySQL database) on work term.
Also developed personal website and hackathon projects on node servers.

Linux and virtualization

Used Linux VMs on prior work term to test kernel space applications and fuzzing tools.
Regular use of Linux for school assignments and coding side projects.

Python

Learned python through online course and use in web apps at hackathons.

PLCs and circuit design

Gained experience with PLCs and circuit design from university level courses.

COURSES

Algorithms and Data Structures

Data structures, ADTs, recursive algorithms, algorithm analysis and design, hashing and problem-solving strategies.

Circuits

Circuit design and components, magnetic fields and induction, ICs and wave analysis.

Microprocessors & Digital Logic

PLC programming, sensor technology and computer interfacing.

WORK EXPERIENCE

Security Researcher 2015

BlackBerry

Wrote research reports on Linux kernel fuzzer (instructions for cross compilation, use and modification).
Analysed and documented kernel space applications and drivers.

Web Developer 2015

Canada Company

Design, code and test functionality changes to a charity web site (canadacompany.ca).
Web application ran on a tomcat server with MySQL database.
Content updates made using Cascade CMS.

SIDE PROJECTS

Bright Box

1st place at UofT Hacks

Created smart light switch using "Particle" prototyping board providing users control and ability to set alarms and schedules over HTTP requests via our android application.

Lazy Car

Hack Western

Modified RC car using Arduino to allow users to steer using hand gestures (with the "Leap Motion") and see from a "real life" POV with the Oculus VR headset.

Nxt Guard Turret

Developed control software for Lego NXT nerf turret with automated target lock on using ultrasonic sensors and remote control capabilities.

Autonomous Fuel Cell Car

Constructed hydrogen fuel cell car and programmed MSP430 micro controller to allow it to manoeuvre through a maze using touch sensors.

Security System

Developed laser alarm system using Arduino microcontroller.

Where Are You

Boston Hacks - "Greatest Impact Hack"

Made web application to help families find missing loved ones using facial recognition APIs, a NODE server and MySQL database.

R.unear.me

McHacks - "Top 10 Hacks"

Web app allows users to see friends on map with real time location updates, and directions. Used Firebase to provide real time updates.