

## PROFILE SUMMARY

- Experienced in building and testing across platforms including web, mobile, virtual reality and microprocessors
- Diverse portfolio of electromechanical and software projects
- Applied experience in using CAD software for mechanical design and schematic capture
- Special interest in interdisciplinary electromechanical systems and emerging technologies

## EXPERIENCE

### *Rapid Prototype Developer. Canon Innovation Lab*

KITCHENER. SEPT 2016-DEC 2016

- Advanced a VR camera simulation game using Unity (C#), supporting major functionalities on the Oculus Touch Controllers in place of gamepad
- Project page: [eexie.github.io/work/hardware/vr-camera-sim](http://eexie.github.io/work/hardware/vr-camera-sim)
- Conceptualized and executed various hardware and software solutions, as proof of concepts
- Designed and 3D printed multiple solutions during prototyping process
- Developed on platforms including embedded systems (Arduino, Raspberry Pi), full-stack web apps, 3D printing, iOS, and various Canon products
- Demoed prototypes biweekly, frequently to Canon North America executives

### *Dyno Harness Lead - Electrical System.* *UW Formula Motorsports (FSAE)*

WATERLOO. SEP 2016-PRESENT

- Redesigned the power distribution of the fusebox and signal transmission of the engine control unit in Fritzing
- Analysed sensor readings with custom data logger to optimize engine performance during tuning, and driver performance during testing
- Designed multiple electrical housing units and suspension components in Solidworks
- Assisted in building and debugging the electro-pneumatic shifter board and vehical harnesses

### *Innovation Specialist. Scotiabank Digital Factory*

TORONTO. JAN 2016-APR 2016

- Explored and applied neural networks and deep learning philosophies to financial applications in Python using Tensorflow
- Initiated and maintained an internal blog series educating Scotiabank employee network on machine learning

## RELEVANT SKILLS

Python	C#	3D Modelling
JavaScript	Soldering	Fritzing
Solidworks	CNC Machining	Git
REST API	Fusion 360	Unity3D
Oculus Rift	Arduino	Raspberry Pi
Docker	Node.js	JQuery

## PROJECTS

### *Touch Guitar*

SOLO PROJECT. NOV 2016-PRESENT

- Building an Arduino-driven guitar with a laser-cut acrylic body, and capacitive touch sensors
- An audio file plays while strings are touched, transforming any user into an amazing guitar "player"

### *Dryerase Stocks. Bostonhacks*

BOSTON UNIVERSITY. OCT 2015

- Plotted stock market and personal accounting data on a dry erase board using an Arduino Uno, a Raspberry Pi 2, and stepper motors
- Designed and built mechanical assembly, calculated coordinate math, set up Raspberry Pi-to-Arduino data transfer
- Won Capital One API award for best project utilizing Capital One data

## EDUCATION

### *Candidate for Bachelor of Applied Science (BASc).*

### *Mechatronics Engineering*

UNIVERSITY OF WATERLOO. SEP 2015-PRESENT

- Represented university at international design team competitions (Formula Motorsports) and national engineering conferences (ESSCO, CFES)

## INTERESTS

Conferences	Photography	Graphic Design
Augmented Reality	Rapid Prototyping	Movie Soundtracks
Blue Jays	Foreign Films	Escape Rooms