

EMMA XIE

MECHATRONICS ENGINEERING



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SKILLS SUMMARY

Variety of prototyping experiences with microcontrollers (Arduino), single-board computers (Raspberry Pi, Intel Edison), wearables (Myo, Oculus)

Proficient in Java, C++, Python, HTML, CSS, Ruby, JavaScript, Android SDK

Keen to learn new technologies, with a special interest in augmented reality and IoT devices

Machining experience using CNC machines, and CAD experience in AutoCAD and SolidWorks

Adept in fast-paced startup environments

EDUCATION

MECHATRONICS ENGINEERING.
UNIVERSITY OF WATERLOO
WATERLOO. SEP 2015-PRESENT

Involvements include Music, Movie Nights, and WiE Directorships with the Engineering Society

CYBERARTS PROGRAM.
DON MILLS COLLEGIATE INSTITUTE
TORONTO. SEP 2011-JUN 2015

Courses of study dedicated to the fine arts, multimedia, graphic and product design

Other involvements include CS club, Game Development Club, President of Robotics Club

INTERESTS

Baseball, hackathons and conferences, photography, graphic design, movie soundtracks, foreign films, escape rooms, indie rock

PROJECTS

MYOPHYSIO. DELTAHACKS 2016

MCMASTER UNIVERSITY. JAN 2016

Developed an Android app for the Myo armband, allowing and reminding carpal tunnel patients to do physical therapy on-the-go

Integrated Myo gestures, designed and implemented app assets, enabled push notifications

Won Best Hardware Hack prize.

TOUCH GUITAR

TORONTO. JAN 2016-ONGOING

Building an Arduino-driven guitar with a laser-printed wooden body, with capacitive touch

An audio file plays while strings are touched, transforming any user into an amazing guitar “player”

Motivation comes from wanting to “play” the amazing rifts in songs from my favourite bands

DRYERASE STOCKS. BOSTONHACKS 2015

BOSTON UNIVERSITY. OCT 2015

Used an Arduino Uno, a Raspberry Pi 2, and two stepper motors to plot stock market or bank account data on a dry erase board

Designed and built mechanical assembly, calculated coordinate math, set up Raspberry Pi-to-Arduino data transfer

Won \$1000 Capital One API award.

EXPERIENCE

ELECTRICAL TEAM. UW FORMULA MOTORSPORTS

WATERLOO. SEP 2016-PRESENT

Fitted wiring and sensors to a Top-5 (worldwide) FSAE car

Analysed sensor readings to optimize driver and car performance

Machined 50+ metal components using CNC machines

Designed electronic housing units in Solidworks

Redesigning and building the team website using Ruby and JS

INNOVATION ENGINEER.

SCOTIABANK INNOVATION WORKS

TORONTO. JAN 2016-APR 2016

Applying various machine learning algorithms and architectures to financial applications in Python using Tensorflow

Scanning and reporting on the innovation ecosystem in a professional newsletter sent to company executives

Built team’s internal website, documenting breakthroughs