

Eric Shi

2B Mechatronics Engineering

www.ericshi.ca

github.com/EricShiGit

Technical Skills:

Software:

Proficient with: Java, C#, C++, C, PLC Ladder Logic

Familiar with: Python, Assembly, VHDL, Bash, Real Time Systems, Scala

Web Technologies: JavaScript, HTML, PHP, ASP.NET, JSP, CSS, Apache, Tomcat

Hardware: Robotics, Arduino, ARM, Microcontrollers, FPGA, Sensors, Analog Circuit Design

Modeling: Fluent with AutoCAD, NX Unigraphics, Introductory Knowledge of Finite Elements

Frameworks: Spring, DaaS, Laravel, .NET 4.0, NUnit/JUnit, RESTful, Django, SOA

Tools/Utilities: Eclipse, Git, Visual Studio, MATLAB, WebLogic, Jira, JXplorer, Maven

RDBMS: SQL Server 2005, MySQL, MS Access, Oracle DB

Equipment: Oscilloscope, Multimeter, Signal generator, Soldering, Machining

Operating Systems: Fluent with Linux, Ubuntu, UNIX, Windows

Experience:

Technology Architect Co-op, Burnaby, BC. **TELUS** Wireless Voice Activations

May 2014 - Sept 2014

- Worked on the network introduction of cloud storage and security services as a new wireless voice bundle
- Designed and implemented a request enhancement framework in Java to concurrently compute net cloud storage values
- Independently engineered a Java Spring MVC web application to automate brand acquisition into the voice activations systems
- Managed and executed large scale cloud and security product testing involving order management, billing, and price plan teams
- Implemented fix for 2 yearlong migration error stemming from an access point and virtual network configuration bug, estimated savings over \$20,000
- Fixed long term LDAP reconciliation error within the service delivery framework network element adapter
- Compiled custom Linux Apache SQL PHP (LAMP) Tomcat stack for a database as a service (DaaS) PHP frontend / Java backend
- Modified network element adapters and regression tested each impacted component for an Oracle database upgrade project

Award: Bravo award **Workshops:** Maven, Spring, Agile **TELUS Day of Giving:** Raised \$8,000 for charities through volunteer initiatives

Technology Architect Co-op, Burnaby, BC. **TELUS** Wireless Voice Activations

Sept 2013 - Jan 2014

- Implemented Java Spring MVC web application to replace a retired order simulation application written in Delphi Object Pascal
- Provided training conferences for order simulation software to on site and international team members
- Implemented RESTful web service in Java to provide an API for Ericsson to provide voice mail and call forwarding
- Unit tested network element Java applications in an UNIX environment
- Wrote a voice activation systems training manual and provided training to new team members as a HR initiative

Programmer Analyst Co-op, Brampton, ON, **Canadian Tire** Transportation Development

Jan 2013 - May 2013

- Implemented a carrier performance metrics application to track and report carrier and driver infractions using C# .NET 4.0
 - Used SOAP web services, unit testing with NUnit, and implemented data access layer, and SQL for database work
- Modelled new relationship SQL database and wrote data migration scripts for legacy carrier incident reports
- Enhanced the report generating guard house tool in VBA with an access database

Volunteer Experience:

Mechatronics Waterloo Engineering Society Representative

Sept 2012 - Present

- Elected class representative for mechatronics class of 2017 to act in the in best interest of the student body by bridging communication between engineering faculty and society executives

Food Sorting – Vancouver Food Bank

August 2014

- Monthly food sorting for local food bank, featured on front page of The Province Newspaper, **Digital Article:** bit.ly/1tGJc0t

BC Children's Hospital Miracle Weekend – TELUS Telethon Operator	June 2014
<ul style="list-style-type: none"> Collected over \$5,000 of phone pledges for the 27th annual Miracle Weekend 	
Make-A-Wish Foundation – TELUS Car Wash	June 2014
<ul style="list-style-type: none"> Washed and dried cars at the TELUS Burnaby House, raised \$2,100 dollars 	
Equitas Human Rights – Vancouver Amazing Race	June 2014
<ul style="list-style-type: none"> Participated in the amazing race in down town Vancouver, raised \$400 to support Equitas's youth education programs 	
Volunteer – Professional Engineers of Ontario	March 2014
<ul style="list-style-type: none"> Helped run the kinetics bridge building event at the Waterloo museum 	
Durham Asian Cultural Association Youth President	Jan 2010 - Present
<ul style="list-style-type: none"> Hosted mentorship workshop at the Cambridge International Academy visited by Canada MP Chris Alexander 	

Projects:

Autonomous Arduino Fish Feeder , Personal Project	August 2014
<ul style="list-style-type: none"> Designed an Ad Hoc fish feeder using Arduino, a servo motor, and a handmade fish food container to be used during short vacations 	
Personal Website with Blog Engine , Personal Project	August 2014
<ul style="list-style-type: none"> Wrote a blog engine using Python Django, website designed using JavaScript, HTML, and CSS URL:www.ericshi.ca 	
Arduino Roaming Robot , Personal Project	July 2014
<ul style="list-style-type: none"> Breadboard servo motor driver using H bridge, ultrasonic sensors for path finding, bread boarded speaker for voice 	
Autonomous Digital Micrometer , University of Waterloo Project	March 2014
<ul style="list-style-type: none"> Digital Micrometer that measures accurately to a μm. Automated and interfaced with arduino. 7-Segment LED display for output. Video: bit.ly/ZvOZKS 	
UWRobotics Team Sumo Robot Competition , UWRobotics Team	Sep 2012 – Dec 2012
<ul style="list-style-type: none"> Used Atmel's ATmega168 AVR microprocessor (Arduino compatible) to create a lightweight autonomous battle robot that can detect other robots using infrared sensors and push them off the stadium. Placed 4th out of 20 robots. 	
NXT Mindstorm Maze Solver , University of Waterloo Design Competition	Nov 2012 – Dec 2012
<ul style="list-style-type: none"> Solves any arbitrary maze and draws the shortest path through the maze, programmed with Robot C 	
Hydrogen Fuel Cell Car Engineering Analysis	Sep 2012 – Dec 2012
<ul style="list-style-type: none"> Electrical analysis of small hydrogen fuel cell car, drafted technical engineering reports with recommendations 	

Awards & Scholarships:

Society Scholarship , the Society of Energy Professionals	Oct 2012
<ul style="list-style-type: none"> Excellent community involvement, academic achievement and leadership 	
Waterloo Wat-PD Engineering Scholarship , University of Waterloo	Jun 2012
President's Scholarship , University of Waterloo	May 2012
Ontario Power Generation Computer Science Award , Ontario Power Generation	May 2012
<ul style="list-style-type: none"> Outstanding high school record and written essay 	
Southern Ontario Jazz Festival Gold Standard , Southern Ontario Band Festival	Mar 2011

Education:

Candidate for Bachelor of Applied Sciences, Mechatronics Engineering , University of Waterloo	Sep 2012 – Present
Relevant Courses: Sensors and Instrumentation, Introduction to Computer Structures & Real Time Systems, Linear Systems and Signals, Numerical Methods with Introduction to Finite Elements.	

Interests:

- Enjoys playing ball hockey and ultimate Frisbee
- Hobby/open source electronics and building computers
- Olympic weightlifting
- Involved in health and fitness, nutrition, sports science, and health science
- Fluent in various types of jazz styles playing the alto, tenor, and baritone saxophone
- Video game enthusiast, former professional player

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