

B.A.Sc. MECHATRONICS ENGINEERING, UNIVERSITY OF WATERLOO

SKILLS SUMMARY

- Excellent project management, time management, leadership and communication skills developed through leading and working on projects in school and on co-op placements
- Exceptional analytical and problem solving skills developed while working on several individual and group projects
- Self starter & always eager to learn

TECHNICAL SKILLS

- Solid programming experience in C, C++, C#, Java/J2EE, PHP, Matlab, SQL, HTML/CSS, Python
- Experience designing and developing 2 Android applications
- Excellent 3D CAD skills: experience with SolidWorks, Pro Engineer, Google SketchUp and AutoCAD
- Extensive experience with Arduino and Raspberry Pi
- Proficient in Matlab, MS Office suite, Windows, Mac and Linux

WORK EXPERIENCE

ROCKWELL AUTOMATION

Intern, Quality Engineering
Oct - Dec 2012

- Reduced average defects per unit in medium voltage drives from 10.2 to 7 using pareto & Process Failure Mode Effect Analysis (PFMEA) and implementing countermeasures; led to massive cost savings
- Greatly simplified root cause and pareto analysis by developing self-updating quality analysis tool
- Played key role in technology transfer to new facility in Brazil

TOYOTA MOTOR MANUFACTURING CANADA

Java/J2EE Developer
Jan -Apr 2012

- Improved efficiency of annual inventory process by about 50%, led to cost savings of \$200k+ annually; savings attained by replacing inefficient paper-based system with newly designed system involving tablets & centralized database
- Developed several modules for internal software system used to audit employee hours and plan vacation days

2SOURCE MANUFACTURING

Manufacturing Engineering
Co-op
May - Aug 2011

- Created and modified several parts and drawings in Solidworks for production
- Designed and implemented an internal company request management system using PHP, MySQL, HTML & JS in order to streamline process leading up to manufacturing
- Designed and implemented database for parts using MS SQL Server & C# with graphical front-end

SIEMENS CANADA

Electrical Engineering Co-op
Sept - Dec 2010

- Played key role in project management, project co-ordination and tracking, document control & site inspections for 500kV Static Var Compensator construction project owned by HydroOne, Siemens and Areva

**UNIVERSITY OF WATERLOO
INDUSTRIAL TRAINING
PROGRAM**

Co-op student
Jan - Apr 2010

- Acquired skills in 3D CAD in ProEngineer, hands-on skills in machining, foundry and welding
- Successfully designed and fabricated custom lawnmower as part of final project

EDUCATION

UNIVERSITY OF WATERLOO
*B.A.Sc. Honors, MECHATRONICS
ENGINEERING*
CLASS OF 2014

Relevant Courses:

Machine Intelligence, Computational Neuroscience, Finite Element Methods, Engineering Economics, Real Time Operating Systems, Algorithms & Data Structures, Microprocessor Systems & Interfacing, Linear Systems and Signals, Digital Controls, Power Electronics, Technical Entrepreneurship

RELEVANT PROJECTS

3D Laser scanner

- Designed and built low cost, innovative laser sensor capable of modeling its environment and objects around it in 3 dimensions. 3D point cloud data is streamed to computer in real time wirelessly over UDP
- Possible applications: autonomous robot navigation, physical object replication, animation and 3D modeling

Autonomous boat

- Designed and created an autonomous boat capable of navigating itself around racecourse
- Utilized IR proximity sensors and implemented PID controller on Arduino

Real Time Operating System

- Programmed Real Time Operating System (RTOS) on top of UNIX using C, C++ and concepts in algorithms and data structures
- Implemented concurrency, timing services, process management, inter-process communication, scheduling and other features

Facebook Hackathon 2014

- Designed and built 'Like-meter' LED T-shirt in 24 hours
- LEDs in 'Like-meter' light up as people like your recent activity on Facebook

VOLUNTEER EXPERIENCE

**Engineers Without Borders
(EWB)**

- Volunteered on fundraising team. Assisted with event organization and management

UW Canada Day Celebrations

- Volunteered for event organization and security

ACTIVITIES AND INTERESTS

- Was actively involved with several student clubs including fencing, tennis, Engineers Without Borders (EWB), badminton, UW Tennis, ballroom dancing, archery, salsa, paintball
- Enjoyed skydiving, 1hr experience flying Cessna 152