

Craig Loewen

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3B Mechatronics Engineering – Option in Management Science, University of Waterloo

Skills

- Programming Languages: C#, C, C++, Java, Python, MATLAB, Android, SQL, and Visual Basic
- Concepts: Computer Vision, Machine Learning, Real Time Systems, User Interface Design
- Skills: Product and Program Management, Product Design, Problem Solving and Debugging as evidenced by being ranked 1st in the Mechatronics Engineering class

Technical Projects

Spot Me www.craigloewen.com/spot-me

August 2016 - Present

- Developed an open source application that uses deep learning algorithms to analyze your exercise form when using weights and provide personalized training advice, in C# on the Universal Windows Platform
- Collaborated with a graphics designers to create an image and brand, resulting in a 3.5% conversion rate for subscriptions to product news and the application being featured on www.xboxdynasty.de

Artificial Intelligence to Learn a Game www.craigloewen.com/aiprojectinfo

January – May 2016

- Developed a Neural Network that is modified by a genetic algorithm to learn a simple game that exceeds the performance of an average human player within the first 10 games

Real-Time Dinosaur Runner Game

December 2015

- Built a dinosaur running game using multi-threading and hardware interrupts for faster response time
- Achieved a mark of 100% while developing on the RTX Real-Time operating system kernel on the ARM Cortex-M3 board using C and constrained by 32 KB of RAM

Work Experience

Process Engineering Student, General Motors, Saint Catharines, ON

September – December 2016

Automotive Industry, Powertrain Production Facility, Transmission Machining

- Implemented a camera to recognize and sort defects using optical recognition software and PLC logic
- Developed a program to create a readable quality report from OEM custom machine code in C#

Quality Engineering Student, Siemens, Konstanz, Germany

January – April 2016

Postal Automation Industry, Global leader in automation, Airports and logistics division

- Designed and implemented a new tool calibration system and device to reduce calibration time by 40%
- Designed a PCB for the sensor's hardware interface, and programmed the user interface in C++

Student Group Leader, General Motors, Ingersoll, ON

May – August 2015

Automotive industry, Builds GMC Terrain and Chevrolet Equinox, leanest automotive plant in Canada

- Reduced line downtime by 20% through skilled management of over 30 unionized employees
- Independently executed a 5S continuous improvement project to reduce repair costs by \$30,000 a month

Project Engineering COOP, CGC Inc., Hagersville, ON

January – April 2014

Building materials industry, Fortune 500 USA based multinational company

- Instituted a policy to save the company \$15,000 annually through the purchase of a drone
- Programmed a path finding software to optimize forklift traffic routes in Java

Awards and Achievements

University of Waterloo

September 2013 - Present

- First in Class Engineering Scholarship, for being ranked 1st in academics in a class of 140+ Students
- Richard Motzeg Memorial Scholarship, for excellence in academics and extracurricular leadership
- President's Scholarship of Distinction, for academic achievement

Extracurricular Activities and Interests

President of University of Waterloo Weightlifting and Fitness Club

September 2015 – Present

Languages: Conversational German and French