

# Matt Kowalczykowski

## Mechatronics Engineering



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## Summary of Qualifications

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- Hands on experience building autonomous robots using the Arduino platform
- Use of AutoCAD software including Inventor and Solidworks for designing and prototyping parts and assemblies
- Applied knowledge of Lean Manufacturing techniques from co-op experience
- Proficiency in drafting engineering sketches in isometric and multiview styles from engineering design courses
- Comfortable working with measurement tools such as vernier calipers, height gauges, bevel protractors and micrometers and using these tools to create precise engineering drawings
- Use of electrical equipment such as power supplies, switches, load cells, oscilloscopes and function generators
- Extensive practice with Python, Java, Matlab and Microsoft Office gained from school experience and personal projects
- Experience in leading teams to achieve results above and beyond what is expected

## Work Experience

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### **Weld Cell Lead**    *Jancox Stampings*    *May 2014 – September 2014*

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- Received an Outstanding rating and as a team overproduced expected levels by an average of 26%, as well as improving the record amount of parts made in a single shift by 36%
- Experience operating multiple manufacturing machines including welders, steel presses and quality control stations
- Developed communication and troubleshooting skills with management and technical workers
- Improved efficiency by taking the time to learn minor troubleshooting fixes for equipment
- Use of several quality control techniques to ensure a high quality product for the customer

### **Crew Trainer**    *McDonald's Canada*    *January 2011 – May 2014*

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- Fully trained on kitchen and counter positions and being responsible for leading both
- Trained numerous new employees on a regular basis, as well as instructing more experienced employees on new
- Recognized as key member of the chain of command, and was entrusted to be in charge while management was unavailable
- products and techniques, as well as continual improvement
- Completed Station Observation Checklists to ensure employees were knowledgeable and adept with their respective stations
- Courteous and respectful when dealing with customers and fellow employees

# Education

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## McMaster University    *Mechatronics Engineering, B.Eng*    *September 2013 – Present*

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- Courses in statics and dynamics, mechanical engineering measurements, and electromechanical machines
- Software Engineering courses that focused on object oriented principles, various data structures, and designing robust code in a variety of languages
- Hands-on design labs making practical devices such as a working speaker system, and using a variety of mechanical and electrical measuring devices

## Relevant School Projects

- ENG 1P03 – Introduction to Professional Engineering : Mechanical Assistance Device
  - Designed a device that allowed a client with rheumatoid arthritis to operate gas pumps easier
  - Open ended design problem that required planning, creative thinking and device prototyping
  - Intermittent client meetings allowed feedback that led to improved design that was suitable for extended use
  - Our clasp and lever design highlighted in class as an example of creative solution to client's need
- ENG 1C03 – Engineering Design and Graphics : 3D Printed Optical Drive Reader
  - Project involved designing and prototyping a replacement gearbox for a CD-ROM reader
  - MapleSIM was used to simulate the gears to ensure proper output speed
  - Gears and stage designed in Inventor, as well as a complete assembly file
  - Final design was 3D printed and had to demonstrate physical output rotation given a unique input

# Extracurricular Activities & Interests

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## McMaster Sumobots Competition

- Competition to develop an autonomous robot that is able to push other robots out of a circular ring
- Applied knowledge of topics discussed in class setting
- Use of Arduino programming language and libraries
- Deadline based development schedule

## McMaster Guitar Club

- Volunteer teacher, doing weekly lessons for beginner guitar players
- Organized and designed personal lesson plans