

Christopher Mak

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Hamilton, Ontario

Experience

Electrified Powertrains Designer

Aug 2020 – Present

Enedym Inc, Hamilton, ON

- Development of powertrain and hybrid energy storage system for Class 8 B-Train Truck
- Design, and production of 2-in-1 switched reluctance machines with integrated inverter
- Prototyping of electric motorcycle with switched reluctance machine

ECE Researcher

May 2015 – Jun 2020

McMaster Automotive Resource Center, Hamilton, ON

- Reverse engineering, design and prototyping of internal and external rotor switched reluctance machines.
- Developed belt driven motor test bench for high torque permanent magnet external rotor pancake motor.
- Design of multi-phase inverter for switched reluctance motor drive.
- Participated in USCAR project collaborating in an international research project into fuel cell electric vehicles. Reverse engineered mechanical and electrical aspects of power electronic components.
- Research and development for 2-in-1 axial flux motor for aerospace application

Hardware Skills

- Manual Turning and Milling
- Design for manufacturing
- Electronics: Multimeters, Oscilloscopes
Circuit Boards
- Programmable single board computers
- Soldering: Through Hole, SMD

Software Skills

- CAD, CAE:
Siemens NX 8 & 9, Teamcenter SolidWorks,
CATIA v5, AutoCAD Inventor, Altium
Designer, JMAG, EagleCAD, Ansys, NX
Nastran
 - Programming Languages:
C++, Visual Basic, Java, MATLAB, MySQL
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Education

Masters of Applied Science, Electrical Engineering

Aug. 2020

McMaster University, Hamilton, ON

Bachelor of Technology

Dec. 2016

McMaster University, Hamilton, ON

Advanced Diploma - Mechanical Engineering Technology – Automotive and Vehicle Technology

Certificate in Business Management

Dec. 2016

Mohawk College, Hamilton, ON