

# KEN WONG



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3A Mechanical Engineering

## Summary

Software: SolidWorks, Inventor, EPDM, Vault, LabVIEW, Microsoft Office, C++, Arduino-C  
Mechanical: Machine and Fixture Design, Mills, Lathes, CNC, FEA, Welding, Sheet Metal, Assembly Tooling  
Electrical: Data Acquisition, PID Control, Sensors, Motors, Motion Systems, Heaters, Lithium Batteries  
Education: University of Waterloo, Candidate for Bachelor of Applied Science, Mechanical Engineering

## Experience



**Mechanical Intern**, Instron Winter 2015  
Norwood, MA  
Designed, prototyped, and evaluated a mechanical device to prevent machines from damaging samples during non-destructive compression tests  
Interfaced with vendors to produce prototype components



**Structural Health Researcher**, University of Waterloo Spring 2014  
Waterloo, ON  
Designed and built a desktop shaker table for testing building models with LabVIEW control software, PID acceleration control and data logging



**Materials Researcher**, Xerox Research Centre of Canada Fall 2013  
Mississauga, ON  
Automated control and data acquisition on an inkjet print fixture with LabVIEW, servomotors, heaters, temperature sensors and pneumatics



**Mechanical Intern**, Gypsum Technologies Winter 2013  
Mississauga, ON  
Produced fabrication packages for industrial drywall production equipment  
Selected motors, chain drives, pneumatic components, and sensors



**Technician**, Ecamion Spring 2011  
Whitby, ON  
Assembled and tested lithium battery modules for anti-idling applications



**Service Technician**, Control Panel Systems (High School Co-op) Winter 2011  
Whitby, ON  
Repaired and calibrated Atlas Copco, Ingersoll Rand, and Techmotive, electric and pneumatic industrial tools in an ISO 17025 accredited lab

## Extra-curricular



**Waterloo Formula Electric Motorsports** 2014 – Present  
Waterloo, ON  
Designed a dual motor drivetrain and lithium battery system using SolidWorks for the Electric Formula SAE competition



**FIRST Robotics Competition** 2008 – 2013  
Whitby, ON  
Designed and built competition robots for different annual challenges  
Integrated motors, gears, chain drives, encoders, and other sensors to automate specific actions executed by the robot



**Electric Vehicle Conversion** 2010 – 2012  
Whitby, ON  
Replaced the original engine, exhaust and fuel systems with an electric motor, controller, and lithium batteries in an Audi A4  
Designed a coupler and adapter plate to interface the original manual transmission and clutch to a 9" series wound DC motor



**CNC Milling Machine Conversion** 2013  
Whitby, ON  
Designed and machined components to retrofit stepper motors  
Provided machining and consulting services to startups and colleagues