

David Wong

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New graduate who excels in mechanical design, simulations, and programming, with dedication and commitment proven from success in Formula SAE collegiate design competitions, who is looking forward to contribute to a dynamic team.

Education

University of Waterloo
Bachelor of Applied Science, Mechanical Engineering

Waterloo, ON
2009 - 2014

Accomplishments

- Improved the planning, project management, and team building of the largest undergraduate student design team
- Led and managed a six person team to design the Formula SAE race car powertrain and electrical system
- Chaired team meetings and supervised co-op students on a daily basis
- Oversaw the race car finishing three full endurance races, and came 2nd place in the Formula North design competition

Professional Experience

Aeryon Labs Inc.	Waterloo, ON
Test Development Co-op	Sept. - Dec. 2013
<ul style="list-style-type: none">• Spearheaded the investigation of motor defects in autonomous quad rotor aerial vehicles• Developed testing strategies and analytical models to quantify motor torque, efficiency and response• Under minimal supervision, designed and built a dynamometer for verifying mathematical model of brushless DC motors• In a three week time frame, programmed and wired-up a lithium-ion battery test rig, which was immediately put into use by the production team	
ANSYS Canada Ltd.	Waterloo, ON
Technical Service Co-op	Jan. - Apr. 2013 & May - Aug. 2012
<ul style="list-style-type: none">• Carried out a case study on turbo machinery blade flutter, provided valuable feedback to software developers• Assisted a long term client by scripting a custom macro which generates secondary flow visualizations in the post processing stage• Quantified the characteristic differences between 2-dimensional and 3-dimensional flow simulations through a case study on an automobile turbocharger	
Multimatic Corporation - Technical Centre	Markham, ON
Technical Engineering Student	Sept. - Dec. 2011
<ul style="list-style-type: none">• Designed an innovative way to test door checkers, and extract data• Performed ASTM standardized tests on composite sandwich panels for luxury sports car chassis construction• Administrated various tests on automobile hinges and rollers, and collected data in a highly disciplined and organized fashion	
Multimatic Corporation - Dynamic Suspension	Newmarket, ON
Test Lab Technician	Jan. - Apr. 2011
<ul style="list-style-type: none">• Salvaged several pieces of testing equipment by repairing and replacing worn out components• Repaired and maintained servo-hydraulic actuators, pumps, and pneumatic systems for online testing equipment	
United Controls Ltd.	Hong Kong SAR
Engineering Assistant	May - Aug. 2010
<ul style="list-style-type: none">• Calibrated flow meters and pressure sensors in laboratory for HVAC applications• Performed field repair and trouble-shooting of HVAC components in construction sites	

Technical skills

Software

Electrical
Operating System
Programming
Mechanical

ANSYS 14.5 (CFX, Fluent, Mechanical), MATLAB & Simulink, SolidWorks 2013-2014, NX5 Unigraphics, MS Office Suite
Wiring harness fabrication, soldering, PCB etching and assembly
Windows 7/XP, Linux(Ubuntu)
C, C++, Python, Perl, VBA
Milling machine, lathe, engine rebuilds, hand and power tools