









KEN WONG



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4A Mechanical Engineering

Summary	Software:	SolidWorks, Inventor, EPDM, Vault, MasterCAM, 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, Heaters, Batteries		
	Education:	University of Waterloo, Candidate for Bachelor of Applied Science, Mechanical Engineering		
Experience		Machine Tool Research Intern , University of Waterloo Designed and fabricated precision linear feed drives using linear motors Designed flexures for inducing chatter vibrations at specific frequencies to emulate large scale machine tools	Spring 2016 Waterloo, ON	
		Powertrain Manufacturing Intern , Tesla Motors Designed 25-100kN press stations with automatic tool changing, automated gauges, fixtures, and tooling for drive unit assembly in SolidWorks Integrated sensors and mechanical features for error proof assembly	Fall 2015 Fremont, CA	
		Mechanical Design Intern , Instron Designed, prototyped, and evaluated compression test tooling Interfaced with vendors to produce prototype parts	Winter 2015 Norwood, MA	
		Structural Health Research , University of Waterloo Designed and fabricated a desktop shaker table for testing building models with LabVIEW control software, PID motion control and data acquisition	Spring 2014 Waterloo, ON	
		Materials Research Intern , Xerox Research Centre of Canada Automated control and data acquisition on an inkjet printing press with LabVIEW, servo motors, heaters, temperature sensors and pneumatics	Fall 2013 Mississauga, ON	
		Mechanical Design Intern , Gypsum Technologies Produced fabrication packages for industrial production equipment Designed safety guarding, brackets, and shipping frames Selected motors, chain drives, pneumatic components, and sensors	Winter 2013 Mississauga, ON	
	Extra-curricular		Waterloo Formula Electric Motorsports Designed an 85kW dual motor drivetrain and 6kWh lithium battery system using SolidWorks for the Electric Formula SAE competition	2014 – 2016 Waterloo, ON
			FIRST Robotics Competition Designed and built competition robots for annual challenges utilizing motors, gears, chain drives, encoders, and other sensors	2008 – 2013 Whitby, ON
		Electric Vehicle Conversion 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 a 9" series wound DC motor and the original clutch and transmission	2010 – 2012 Whitby, ON	
		CNC Milling Machine Conversion Designed and machined components to retrofit stepper motors Provided machining and consulting services to startups and colleagues	2013 Whitby, ON	