

Huzaifa H. Khan

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EDUCATION	University of Waterloo <i>BASc in Mechanical Engineering</i> <ul style="list-style-type: none">• Capstone: Autonomous EV Charging Robot for Robo-Taxis	Waterloo, Canada April 2020
INTERESTS	Autonomous Vehicles, Robotics, Machine Learning	
WORK EXPERIENCE	Voyage Labs <i>Intern, Mechatronics Design</i> <ul style="list-style-type: none">• Highlights: Developed an automated system for testing THC sensors using a 3-axis liquid-handling robot. Created python scripts to execute test protocols and reduce cycle time by 66%.	Waterloo, Canada Sep 2019 - Dec 2019
	Tesla <i>Intern, Energy Products Design</i> <ul style="list-style-type: none">• Highlights: Designed steel enclosures for high-pressure testing to validate the function of deflagration vents in Megapack. Optimized structural integrity using FEA simulations in CATIA V6.	Palo Alto, USA Jan 2019 - Apr 2019
	Tesla <i>Intern, Energy Products Manufacturing</i> <ul style="list-style-type: none">• Highlights: Root-caused the primary source of scrap rate in battery module process by studying manufacturing line and quality log. Implemented corrective action to reduce OpEx costs by \$1.5M.	Sparks, USA Sep 2018 - Dec 2018
	Tesla <i>Intern, Model S/X Powertrain NPI</i> <ul style="list-style-type: none">• Highlights: Collaborated with cross-functional teams to test and validate over 20 production changes for Model S/X powertrain. Analyzed large data sets using statistical methods to suggest improvements.	Fremont, USA Jun 2018 - Sep 2018
	Toyota <i>Intern, Body-Weld Manufacturing</i> <ul style="list-style-type: none">• Highlights: Designed robot end-of-arm tooling to achieve multi-model capability between Corolla and RAV4 parts. Assessed design against competing options under safety, quality, productivity and cost criteria.	Cambridge, Canada Jan 2018 - Apr 2018
	Department of National Defence <i>Intern, Submarine Weapon Systems</i> <ul style="list-style-type: none">• Highlights: Investigated the root cause of failure for damaged Submarine Indicator Units (SIUs), Proposed design modifications to reduce joint stresses in SIUs by 70% and yield \$35,000 in savings.	Gatineau, Canada Sep 2016 - Dec 2016
	University of Waterloo Formula Hybrid SAE <i>Team Member, Powertrain Design</i> <ul style="list-style-type: none">• Highlights: Worked in a small team to design and prototype a motor cooling system to enhance vehicle performance. Developed a data logger using an Arduino & thermocouples to monitor ATF temperature during wet rotor testing.	Waterloo, Canada Sep 2015 - Jul 2016

AWARDS	ASME Northern Alberta Design Award	2020
	General Motors Innovation Award	2020
	Engineer of the Future Fund	2020
	Hack for Health Competition Winner	2015
	University of Waterloo President's Scholarship	2015
SKILLS	Mechanical Design: CATIA V6, Solidworks, manufacturability, fixtures, GD&T	
	Engineering Tools: FEA in CATIA & Solidworks, CES EduPack, Matlab, LabView	
	Prototyping: 3D printing, laser cutting, CNC machining, Arduino, soldering	
	Languages: Python, C++, G-Code, L ^A T _E X	
	Theory: Mechanics, materials, fatigue, plastics & composites	
RELEVANT COURSES	Self-Direction: Strong initiative to learn, solve problems and ask questions	
	Mechanical Design 2 (ME423); Advanced Dynamics and Vibrations (ME524); Fatigue and Fracture Analysis (ME526); Manufacturing of Mechanical Materials & Composites (ME596)	