ROBERT POTRA

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EDUCATION

University of Western Ontario, London, ON *Sep. 2016 — Present*
- Bachelor of Engineering Science, Mechatronic Systems Engineering
- Dean's Honour List, 2016 - Present
- Certificate of Leadership and Innovation

WORK EXPERIENCE

Visiting Scholar Engineering Intern, Macquarie University, Sydney, NSW *May 2019 - Aug. 2020*

- Created mechanical components for a specimen-specific, parametric shoulder simulator
- Implemented control algorithms using kinematic and force sensors
- Designed software used for biomechanics shoulder simulator experiments

NSERC Undergraduate Student Research Award (USRA), *May-Aug. 2018*
Roth McFarlane Hand and Upper Limb Centre, London, ON *May-Aug. 2017*

- Scanned and 3D printed splints for patients with chronic conditions
- Evaluated surgical approaches of the shoulder and elbow with surgical fellows through cadaver studies
- Performed statistical analyses for cadaver studies (ANOVA and inter/intra-rater reliability)
- Reverse-engineered cadaver specimens using the Artec Space Spider 3D scanner

EXTRACURRICULAR ACTIVITIES

Low Voltage Lead, Western Formula Racing (Formula SAE), London, ON *Sep. 2016 - Present*

- Final year project of an electrified powertrain containing a DTI HV-500 inverter, and Emrax 228 Motor, and 500 V Lithium-ion battery with custom management system
- Designed the Grounded Low Voltage Systems for the 2018-2019 and 2020-2021 seasons
- Mentored junior team members
- Integrated sensors, constructed wire harnesses, and performed data acquisition using MoTeC M150 ECU

PROJECTS

LED Cube
- Implemented Serial Peripheral Interface (SPI) with daisy-chained shift registers
- For more information visit https://www.youtube.com/watch?v=gPpLKZm38aA

SKILLS

Proficient	Some Knowledge
MATLAB	Python, Arduino, C++
SolidWorks (Certified SOLIDWORKS Associate)	LabVIEW
Microsoft Visio, Excel, Powerpoint, and Word	Autodesk EAGLE
3D printing (FDM and SLA)	Materialise Mimics
Artec Studio, Geomagic Wrap	SPSS
3D Scanning (Artec Space Spider)	LaTeX
Proficient in spoken Romanian	Simulink