

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 feedback
- Designed software used for biomechanics shoulder simulator experiments

**NSERC Undergraduate Student Research Award (USRA),
Roth McFarlane Hand and Upper Limb Centre**, London, ON

May-Aug. 2018

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

Western Formula Racing (Formula SAE), London, ON

Sep. 2016 - Present

- Low voltage subsystem lead for the 2020-2021 season
- Final year project of electrified powertrain with 500 V battery, DTI HV-500 inverter, and Emrax 228 Motor
- Designed the Grounded Low Voltage System for the 2018-2019 and 2020-2021 seasons
- Mentored electrical team members
- Designed and manufactured wire harnesses
- Integrated sensors using CAN protocol 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

- MATLAB
- SolidWorks (Certified SOLIDWORKS Associate)
- Microsoft Visio, Excel, Powerpoint, and Word
- 3D printing (FDM and SLA)
- Artec Studio, Geomagic Wrap
- 3D Scanning (Artec Space Spider)
- Proficient in spoken Romanian

Some Knowledge

- Python, Arduino, C++
- LabVIEW
- Autodesk EAGLE
- Materialise Mimics
- SPSS
- LaTeX
- Simulink