Matthew Leung

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Education

B.A.Sc. in Engineering Science
University of Toronto | 2018-Present

Skills

Programming
Python • C • Java • MATLAB
Verilog • Arduino • Raspberry Pi

Technical
Machining • Circuits
Metal and Wood working

Graphics and Media
Photoshop • After Effects
Vegas Pro

Astrophotography
Telescope setup
Basic image processing

Other Experience

- George Brown / U of T MIE Basic Machining Course Certification (2019)
- Representative, **Faculty Council** Undergraduate Curriculum Committee (2019)
- President, Markville S.S. **Peer Tutoring Club** (2018)
- **SHAD** Fellow (2017)

Hobbies & Interests

- Photography
- Stop Motion Animation
- Reading about History
- Badminton
- Chess

Awards

Electro-Federation Canada Scholarship Award	2019
Division of Engineering Science ESROP Global Research Fellowship	2019
University of Toronto Bennett Scholar	2018
TransCanada Community Leaders Scholarship	2018
Ontario Principals' Council Award for Student Leadership	2018
2nd Place: **Canadian Association of Physicists** Art of Physics Competition	2018

Work Experience

National University of Singapore
Undergraduate Research Assistant
May 2019 - August 2019

- Worked under Prof. Ghim Wei Ho at the ESP Multidisciplinary Laboratory, Department of Electrical and Computer Engineering
- Investigated surface plasmon resonance in photocatalytic hydrogen generation

Light and Love Home in Toronto
Teacher Assistant
June 2016 - August 2016

- Taught a class of 20 Grade 4 and 5 students at an academic summer camp
- Created math and science course materials based on the Ontario curriculum
- Organized activities, events, and field trips; supervised volunteers

Volunteering

Institute of Electrical and Electronics Engineers (IEEE) U of T
Electronics Associate
April 2019 - Present

- Helping to plan hackathons, electronics workshops, and outreach events
- Currently working on sponsorships and logistics for the chapter

University of Toronto Society of Petroleum Engineers
Vice President, Marketing
August 2019 - Present

- Responsible for marketing strategy, creation of posters and graphics, and promotion of events through social media

Projects

GoTo Telescope Mount

- Created an alt-azimuth mount controlled by a Raspberry Pi, for a 4.5" Newtonian telescope; Programmed with Python and Arduino C
- Used AstroPy and Multiprocessing libraries for object tracking and coordinate transformations
- Features: Internal database of all Messier and NGC objects, feedback system using optical rotary encoders, wireless control