# Matthew Leung

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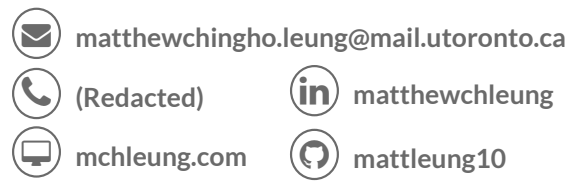📞 (Redacted)
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## Education

### B.A.Sc. in Engineering Science
University of Toronto | 2018-Present
- Specializing in Engineering Physics
- Minor in Artificial Intelligence Engineering

## Skills

### Software Development
**Languages**
Python • C/C++ • MATLAB • Java
**Libraries and Frameworks**
NumPy • SciPy • Pandas • OpenCV • PyTorch • TensorFlow • Astropy • Java Applet

### Hardware
Arduino • Raspberry Pi • Verilog • Embedded Systems

### Graphics, Media, & Typesetting
Photoshop • After Effects • Vegas Pro • Figma • LaTeX

### Optical Design
Zemax OpticStudio

## Other Experience
- **Caltech** GROWTH Astronomy School (2020)
- **edX / ANU** Astrophysics XSeries Program (2020)
- **George Brown / U of T MIE** Basic Machining Course Certification (2019)
- **SHAD** Fellow (2017)

## Hobbies & Interests
- Photography
- Stop Motion Animation
- Reading about History
- Playing Guitar

## Work Experience

### Dunlap Institute for Astronomy & Astrophysics – *Research Assistant*
May 2020 - Present
- Working under Dr. Shaojie Chen on a DMD-based Multi-Object Spectrograph
- Designed, analyzed, and optimized optical systems with Zemax OpticStudio
- Currently working on a wavelength calibration fit to correct hyperspectral imaging distortion
- Created and submitted a poster for the Royal Astronomical Society Early Career Poster Exhibition (*poster link here*)

### National University of Singapore – *Research Assistant*
May 2019 - August 2019
- Worked under Prof. Ghim Wei Ho in the Nanomaterials and Nanosystems Innovation Research Group, Department of Electrical and Computer Engineering
- Investigated surface plasmon resonance in photocatalytic hydrogen generation, and solar reflective nanofilms

## Projects

### GoTo Telescope Mount 🖥
- Created an alt-azimuth mount controlled by a Raspberry Pi and Arduinos, for a 4.5-inch Newtonian telescope; programmed with Python and C/C++
- Features: Internal database of 7000+ objects, feedback control system using rotary encoders, object tracking using Astropy and Multiprocessing libraries

## Extracurriculars

### IEEE UofT Student Branch – *Advisor & Marketing Managing Director*
April 2019 - Present
- Led a team to create graphics for events and to manage social media accounts
- Planned technical workshops, outreach events, and a hackathon (MakeUofT)
- Formerly Electronics Associate (April 2019 - March 2020)

### UofT Machine Intelligence Student Team – *Project Developer*
September 2020 - Present
- Working on a project for real estate price prediction with a Convolutional Neural Network in TensorFlow

## Selected Awards

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|---|---|
| **IEEE** Toronto Scholarship ($2,000) | 2020 |
| **Hack The 6ix** Best use of Google Cloud Prize | 2020 |
| **Dunlap Institute** SURP Research Fellowship ($9,500) | 2020 |
| 3rd Place: **UofT Engineering Competition**, Programming Category | 2020 |
| **Electro-Federation Canada** Scholarship Award ($1,000) | 2019 |
| **UofT Division of EngSci** ESROP Global Research Fellowship ($4,000) | 2019 |
| **UofT** Bennett Scholar and FASE Admission Scholarship ($15,000) | 2018 |
| **TransCanada** Community Leaders Scholarship ($1,000) | 2018 |