

# David Chu

Engineering Science, University of Toronto

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## PROFILE

I am a third-year Engineering Science student at the University of Toronto. I am specializing in the Machine Intelligence major. My cumulative GPA is 3.83/4.00. I am well-versed at being in a leadership position and public speaking given my student council, coaching and other volunteer and community-building experience.

### PROGRAMMING LANGUAGES

- **Numeric computing:** Python (NumPy, PyTorch, OpenCV, Pandas) and MATLAB
- **Full-stack development:** HTML, JavaScript, Python (Flask), and SQL
- **Low-level/ hardware (limited experience):** C/C++, Verilog, and ARM assembly

### ACADEMIC ACHIEVEMENTS

#### Bachelor of Applied Science in Engineering Science, University of Toronto (2018-2022)

- Specialty in Machine Intelligence Engineering, cGPA: 3.83/4.00
- Strong interpersonal skills within a team environment and excellent at communicating complex ideas
- Familiar with working at the intersection of math, science and engineering first principles

#### Ontario Secondary School Diploma, North Toronto Collegiate Institute (2014-2018)

- **Graduation awards:** NTCI Bronze Scholarship Award (third highest graduating average of 96.2%)

### WORK EXPERIENCE

#### Regulatory Engineering Intern, Kepler Communications (2020)

- Full-stack development using Flask, SQL, HTML, CSS, and JavaScript
- Formulated and implemented a secure database to store and retrieve international laws and regulations.
- Generated interactive map stimulating user interaction with radiofrequency emission laws
- Researched data structures and algorithms to optimize the run-time efficiency for tracing satellite's radiofrequency emissions along Earth's surface

#### Sailing Instructor, The National Yacht Club (2019)

- Coached sailors at the pre-race level in the competitive C-420 sailboat class
- Engaged athletes with physical, tactical, and mental training. Acted as young athletes' support person

### RECENT PROJECT HIGHLIGHTS

#### Deep Learning Coin Counter (2020)

- Implemented processing and labelling images before training as the data science lead
- Leveraged 3D visualization tools for analyzing the neural network's performance data
- Utilized state-of-the-art computer vision architecture (YOLO v4)
- Available at <https://github.com/ece324-2020/CabbageJumble-aya>

#### Real-time Target Tracking with Computer Vision (2020)

- Spearheaded computer vision for a robotics project using Python's OpenCV library
- Generated software to find and track target in real-time as software lead
- Available at [https://github.com/thedadidchu/esc204\\_charging\\_port\\_finder](https://github.com/thedadidchu/esc204_charging_port_finder)

### EXTRA-CURRICULAR AND HOBBIES

#### Violist, The University of Toronto Campus Philharmonic Orchestra (2019-2020)

- Performed repertoire including Beethoven's Fifth Symphony and Swan Lake

#### Sailboat Racing in the 'C-420 class'

- **U of T Race Team** (2018-2020), representing University of Toronto at a collegiate level. Travel and compete at other universities across eastern Canada
- **Ontario Sailing Team** (2018), representing Ontario at nation-wide events such as the Canadian Olympic-training Regatta, Kingston (CORK)

### ACHIEVEMENTS AND AWARDS

- **Duke of Edinburgh Silver Award** – Currently a Gold-Level candidate (2018 - present)
- **Royal Conservatory of Music – Piano, Level 9**, First Class Honours (2018)
- **Black Belt, Yudansha Kobujitsu Karate-doh Federation** (2016)