# Andre Fu

https://github.com/andre-fu

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## Education

- **University of Toronto** — Toronto, ON
  *Bachelor's In Applied Science (Engineering), Minor in Artificial Intelligence* — *September 2017 - Present*

## Tools & Libraries

- **C, C++, MATLAB/GNU Octave, LaTeX, SQL, FreeCAD, KiCAD, GIMP**
- **Python :** NumPy, Pandas, Matplotlib, Scikit-Image, Scikit-Learn, Selenium, BeautifulSoup4, OpenCV, dlib

## Projects

- **Rosalind**: Bioinformatics and Computational biology algorithm design and code challenge site
- **FoodEase**: Built a Web app using Flask, JavaScript, HTML/CSS and Google's Cloud-Vision API to take images and suggest food recipes with the ingredients provided.
- **KasaSafe**: Using OpenCV developed a self-contained computer vision model detecting drowsy drivers then providing routing options to the nearest rest stop and texting you and an emergency contact.
- **Imaging Station**: Developed both a front end interface and back end for an Imaging Station. Worked extensively with Tkinter, PyInstaller, and Raspberry Pi controls in a Raspbian environment.
- **Chess Player**: Using Tree Structures to develop an automated chess player against a real player also used alpha-beta pruning to optimize space and time complexity.
- **Raspberry Pi Servo Controls**: Created and ran scripts associated with low level C programming in Servo Control.
- **Spotify (Spotipy) Web-Client API**: A small scale API shared among friends in order to add entire albums to a playlist of your choice.

## Experience

- **Pardee Lab - University of Toronto: Leslie Dan Faculty of Pharmacy** — Toronto, ON
  *Undergraduate Researcher* — *May 2018 - August 2018*
  - **Project Lead**: Worked in a wet lab to build a low cost, easy implementable fluorescence microscope. Subsequently used E.Coli expressing eGFP, CFP, RFP to test the fluorescence microscope.
  - **Project Assistant**: Worked in collaboration with international researchers to develop a novel low-cost Zika Diagnostic and Imaging Station.

## Awards & Achievements

**QHacks: Runner Up** — *February 2019*
**YorkU Hacks: WolframAlpha Award** — *September 2018*
**POSTER *Fu et al.* Building and Extending a Low cost Fluorescent Imaging microscope** — *August 2018*
**Undergraduate Summer Research Studentship Leslie Dan Faculty of Pharmacy** — *May 2018 - August 2018*
**Youth Flight Canada Scholarship** — *April 2018 - August 2018*
**International Aviation Recognition Scholarship (International Air Cadets Exchange)** — *June 2017*
**Michael Power St. Joseph Senior Medal of Achievement** — *May 2017*
**First Place National Parliamentary Debating Champion (Royal Canadian Air Cadets)** — *April 2017*
**Glider Pilots License** — *August 2016*

## Relevant Extracurricular Activities

**University of Toronto, International Genetic Engineering Machine (iGEM)** — *Present*

- Dry Lab Lead: Developing a Protein Optimization Algorithm using ANNs and Genetic Algorithms

**University of Toronto, Galbraith Research Society** — *September 2018 - Present*

- Director of Events

**University of Toronto, Biomedical Engineering Club** — *March 2018*

- Third place university wide Biomedical Engineering Competition