

# JOEY YU

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## EDUCATION

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### McGill University

*Bachelor of Arts - Math and Computer Science.*

Montreal, QC  
Sep. 2022 - Apr. 2025

### Dawson College

*Enriched Pure and Applied Science*

Montreal, QC  
Aug. 2020 - May. 2022

- Activities: SPACE initiative. DawsonAI initiative.

## WORK EXPERIENCE

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### P4labs

*Research and Development Intern*

Montreal, QC  
Mar. 2022 - Present

- Designing a high level library that works with a specific 4WD Arduino-based robot and that can be extended by other developers for different applications.

### Dawson College

*Research Intern*

Montreal, QC  
Jan. 2022 - Present

- Recipient of the FRQNT-MITACS College Research Internship Award.
- Working on network searching and surveillance problems.

### Ciena Canada Inc.

*Software Developer Intern*

Montreal, QC  
Jun. 2021 - Jan. 2022

- Recipient of the Mitacs Accelerate Internship Award.
- Worked on the ENCQOR 5G research project with industry partner Ciena Canada.
- Built helper functions in the Python AI Framework for ENCQOR Distributed Fabric (EDF).
- Built testing tools to help with the evaluation of RL models in the emulated EDF environment.
- Wrote unit tests for all of the above functions.
- Minor bug fixes in a Golang codebase.

### Dawson College

*Peer Tutor*

Montreal, QC  
Sep. 2021 - Present

- Mostly tutoring Math and Physics, but able to do Chemistry and Biology as well.
- Math: Calculus 1, Calculus 2, Linear Algebra.
- Physics: Mechanics, Waves and Optics, Electricity and Magnetism.

## VOLUNTEER EXPERIENCE

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### Dawson College

*Mathematics Tutor*

Montreal, QC  
Jan. 2021 - Present

- SHS (Students-Helping-Students).
- Tutoring Calculus 1, Calculus 2 and Linear Algebra.

### PixelExperience

*Project Maintainer/Administrator*

Montreal, QC  
Aug. 2019 - Apr. 2021

- An aftermarket Android firmware based on Google's Android Open Source Project.
- Maintainer for the OnePlus 5/5T, which have received over 10k downloads.
- Merged upstream changes from LineageOS and Linux Kernel Stable v.4.4.x tag.
- Participated in code reviews, and wrote blog posts.

## PERSONAL PROJECTS

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### Astro: Star Formation

Nov. 2021

- McGill Physics Hackathon 2021 Team Project (Winner of the Astro Challenge).
- It simulates the formation of a star from small particles in space using basic physics.
- Video presentation: <https://www.youtube.com/watch?v=JG4PJDeQ5Hw>

### TreeHugger - A Social App for Reconnecting With Nature

Mar. 2021 - Sep. 2021

- A social app (prototype) that focuses on sustainability and mental health.
- The front-end is built with React Native, and the back-end is hosted on Firebase.
- Article: <https://space.dawsoncollege.qc.ca/explorations/article/treehugger>

- Discord Bot** Oct. 2020 - Present
- It is able to stream music in voice chat, solve math problems using Wolfram Alpha, etc.
  - Built with Python.
- COVID-19 Data Visualization** Jan. 2021 - Feb. 2021
- A simple COVID-19 data visualization tool built with Plotly/Dash.
  - Preview: [corona.itsjoeoui.com](https://corona.itsjoeoui.com) (Hosted on Heroku).
- Heat Mapping and Dynamic Heat Distribution** Nov. 2020
- Team project for the McGill Physics Hackathon 2020, built with Python and C++.
  - Winner of the P4labs Heat Rover mini-coding challenge.
  - Video presentation: [https://www.youtube.com/watch?v=Ok2\\_Vdl1S\\_I](https://www.youtube.com/watch?v=Ok2_Vdl1S_I)

## SKILLS & INTERESTS

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**Proficient:** Python, Git, Gerrit, Linux, Numpy, Pandas, Seaborn, Plotly, Dash, Heroku, AOSP.

**Exposure:** Golang, React, React Native, Java, Javascript, TypeScript, Sklearn, TensorFlow, Pygame, HTML, CSS, Django, Bootstrap, Hugo, Flutter, GCP, AWS, Azure.

**Interests:** Algorithms, Data Structure, Backend Development, Machine Learning, Data Science.

## CERTIFICATIONS

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|---|-------------------------------------|
| <b>Go: The Complete Developer's Guide (Golang)</b>                | Stephen Grider - Udemy<br>Jul. 2021 |
| <b>Python for Data Science and Machine Learning Bootcamp</b>      | Jose Portilla - Udemy<br>Jan. 2021  |
| <b>2020 Complete Python Bootcamp: From Zero to Hero in Python</b> | Jose Portilla - Udemy<br>Jul. 2020  |

## HONORS & AWARDS

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|---|---------------------------------------|
| <b>FRQNT-MITACS College Research Internship Award - \$5,000</b>     | FRQNT-Mitacs<br>Jan. 2022             |
| <b>McGill Physics Hackathon 2021 Astro Challenge - Winner</b>       | McGill Physics Hackathon<br>Nov. 2021 |
| <b>Mitacs Accelerate Internship Award - \$10,000</b>                | Mitacs Accelerate<br>Jun. 2021        |
| <b>Winter 2021 - Semestral Honours</b>                              | Dawson College<br>Jun. 2021           |
| <b>Fall 2020 - Semestral Honours</b>                                | Dawson College<br>Feb. 2021           |
| <b>McGill Physics Hackathon 2020 Mini-coding Challenge - Winner</b> | McGill Physics Hackathon<br>Nov. 2020 |
| <b>Carley Contest - Certificate of Distinction</b>                  | University of Waterloo<br>Jan. 2019   |
| <b>Pascal Contest - Certificate of Distinction</b>                  | University of Waterloo<br>Jul. 2018   |

## LANGUAGES

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**English:** Professional Working Proficiency.

**French:** Elementary Proficiency.

**Chinese:** Native Proficiency.