

# Mahir Chowdhury

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## Summary of Qualifications

- Skilled in programming **autonomous** flight systems for **DJI and Parrot drones**.
- Proficient in creating **computer vision** and **object detection models** for drones using **Tensorflow Lite, Roboflow, and Google Colab**.
- Experienced in programming in **Python, Kotlin, Java, C++, Golang, MATLAB**, and **HTML/CSS**.
- Experienced in creating entire **REST API servers** using **Golang, Python, and C++**.
- Proficient in software development skills such as source control, error debugging, SSH tunneling, and the AGILE workflow.
- Licensed from Transport Canada in **piloting drones**.

## Education

### University of Windsor

Windsor, Ontario

HONOURS BACHELOR OF APPLIED SCIENCE ELECTRICAL ENGINEERING WITH CO-OP

Sept. 2019 - Present

- Applied the fundamentals of software and electrical engineering such as electromagnetic fields, circuit analysis, signals and systems, and computer algorithms.

## Work Experience

### RIIS - (Research into Internet Systems)

Windsor, Ontario

SOFTWARE ENGINEER

May. - Sept. 2021, Jan. - Apr. 2022

- Used web servers, REST APIs, and cloud computing that is able to **decrypt drone flight logs** and store them for future use.
- Developed **drone software** for **autonomously flying** and counting cars in a parking lot using **object detection** models (**YOLOV4**).
- Developed an autonomous **plant classification drone** for a client using DJI's SDK.
- Created an **image stitching server** for aerial photos using **Golang** and an **OpenDroneMap docker container**.
- Learned **Kotlin** and the **Jetpack Compose Framework**.
- Programmed a **transit application (ETA Detroit)** for the locals of the city of Detroit.
- Collaborated on projects with teammates extensively using online messaging platforms, project boards, and video calls.

## Projects

### WinParks (BorderHacks 2021)

Sept. 2021

[HTTPS://DEVPOST.COM/SOFTWARE/WINPARKS](https://devpost.com/software/winparks)

- Developed an Android app using that serves as a front-end to the City of Windsor's open database on parks and other recreational services.
- Earned a total of **1500 CAD** and **won first place** for the people's choice award and for the optimizing community services challenge.
- Received an opportunity to turn this idea into a business through **Invest Windsor** and the **City of Windsor** itself.
- **Technologies used: Kotlin Jetpack Compose and Firebase.**

### Pluto (Chatbot)

Sept. 2021

[HTTPS://WWW.ENGDISCORD.XYZ/](https://www.engdiscord.xyz/)

- Developed a **chat-bot** for a University of Windsor Discord server that can be used by members to get information on professors, professor reviews, courses, and campus locations.
- Used **tensorflow and natural language processing** to create a feed-forward neural network model that can understand intents from user queries, questions, and commands.
- **Technologies used: python, discord.py, pandas, tensorflow, nlp-toolkit, text-blob, feed-forward neural network**

## Extracurricular Activities

### IEEE Student Branch

Windsor, Ontario

VICE CHAIR

Sept. 2020 - Apr. 2021

- Practiced **responsibility and leadership** by directing STEM related events for the student branch (ex. Python workshop) which helped to improve the organization's presence at UWindsor.

### Windsor Robotics Club

Windsor, Ontario

CO-FOUNDER AND MEMBER

Nov. 2019 - Present

- **Co-founded** the University of Windsor's first ever Robotics club.
- Actively participated in club activities.

## Honors & Awards

Sept. 2021 **Winner**, BorderHacks 2021 (Hackathon)

Windsor, Ontario

Dec. 2020 **Winner**, Windsor Engineering Competition (Programming Section)

Windsor, Ontario

Feb. 2017 **Winner**, Border-City Hacks

Windsor, Ontario