

# DAN HUYNH

Mechatronics Engineering | danielryanh7@gmail.com | danielrh.ca

## + SUMMARY

- 12+ months of active coding experience using **C/C++, Python, Flask, HTML/CSS, SQL**
- 4+ months of active coding experience using **PHP, Django, JavaScript (jQuery), React, Git, Swift/SwiftUI**
- 3+ years of experience in designing mechanical equipment using **SolidWorks, AutoCAD, and Inventor**
- Skilled and personable communicator that loves working with others

## + PROFESSIONAL EXPERIENCE

### ERP Full-Stack Developer | G.B.I.E | January 2022 – April 2022

- Implemented a self-proprietary method of caching **SQL** results within **PHP** which improved the load time of web pages by up to 643.5% (from 1.48 s to 0.23 s).
- Created MSSQL queries that scraped data from a variety of 73 tables to gather quality data pertaining to the prediction and planning of product shipments.
- Developed several dynamic web applications from the ground up using **JavaScript, PHP, HTML** and **CSS** that displays the shipment and inventory details about several manufactured products.
- Created a large-scale internal system for the R&D department using **Python, Flask, JavaScript** and **MSSQL** that allows employees to create, log time spent, and query lab requests / contributions.
- Created a function using **Openpyxl** which automates the generation of excel reports that display internal and external lab report details for ISO auditors, and SR&ED applications, saving the R&D more than 30 hours of manual labour per year.

### Data Entry Specialist and Quality Assurance Operative | Tigercat Industries | May 2021 – Aug 2021

- Organized 3-hour training sessions in GoToTraining that connected Tigercat trainers to domestic and international dealers.
- Created scripts in Excel that filtered over 49,000 items to detect discrepancies in item and supplier numbers.
- Hands on technical experience operating and assisting the configuration of functions on major forestry machinery (Tigercat X870D, H855E).

## + PROJECTS

### Self-Parking Robot | C, RobotC, Git | 2021

- Developed a program written within **C** that allows an integrated LEGO EV3 robot to use ultrasonic, and colour sensors to successfully locate a suitable parking space and perform a parallel park.
- Implemented error handling that utilises a motor encoder and an ultrasonic sensor to prevent the robot from colliding with nearby objects and attempting to park in an opening of a distance within than a predetermined threshold.
- Wrote technical documentation that included function descriptions, a software design outline, and a full system test which resulted in a grade of 99% in conjunction with the project source code in the capstone project of MTE 121.

### ROS Noetic Motor Controller Driver | C++, ROS: Noetic | 2022

- Developed a driver for a speed-controlled motor using **C++ (OOP)** which was wrapped with **ROS Noetic**.
- Wrapped **C++** getters and setters with publishers and subscribers to read the motor's status and speed, whilst also being able to set max, and motor's speeds respectively.
- Implemented a 4 threaded AsyncSpinner which stops the motor using a **ROS Service** to avoid freezing on call-backs.

### Cap Guesser | Swift, SwiftUI, XCode | 2022

- A 3 view Fibbage-esque trivia game, created using **Swift, SwiftUI** and **MVVM** Architecture for iOS devices.

### Project Portfolio | HTML, CSS, JavaScript, Git | 2022

- Launched a website designed using **Figma** and built using **HTML, CSS** and **JavaScript** that displays a self-biography, side-projects, and links to my other platforms.

Project files and a detailed description of each project can be found by visiting: [github.com/Danryanh7](https://github.com/Danryanh7)

## + EDUCATION

University of Waterloo | 2021-Present | GPA: 3.9 | Honours B.A.Sc. (Mechatronics Engineering) Candidate

Queen's University | 2020-2021 | GPA: 4.0 | B.A.Sc. (Computer Engineering) Candidate | Queen's University Excellence Scholarship

Glenview Park Secondary School | 2016-2020 | Average: 94% | 16x awards + 8x Honour Roll + Ontario Scholar + Valedictorian Nominee