DAN HUYNH

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

+ SUMMARY

- **Languages:** C/C++, Python, HTML/CSS, SQL, JavaScript (jQuery), Swift/Swift UI, PHP
- **Libraries & Frameworks & Tools:** Linux, ROS, Docker, Git, Flask, Django, NumPy, Pandas, Matplotlib, Openpyxl, Regex
- 4+ 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**, and **Pandas** which automates the generation of excel reports that display lab report details for ISO auditors, and SR&ED applications, saving the R&D more than 30 hours of manual labour per year.

Quality Assurance | 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 assisting the configuration of functions on major forestry machinery (Tigercat X870D, H855E).

+ PROJECTS

ROS Noetic Motor Controller Driver | C++ + ROS: Noetic + Docker | 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.

A.I Celebrity Impersonator | Python + TensorFlow + Regex + NumPy + Tweepy | 2022

- Created a **Python** bot that uses a twitter scraper that parses 100 of a given celebrity's tweets using **Tweepy** and preprocesses the training-set using **NLP** and **Regex** to train a **Seq2seq** model on how to speak like the given celebrity.

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.

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.

Project files and a detailed description of each project can be found by visiting my LinkedIn or GitHub

+ EDUCATION

University of Waterloo | 2021-Present | GPA: 3.9 | Honours BASc. (Mechatronics Engineering) Candidate
Queen's University | 2020-2021 | GPA: 4.0 | BASc. (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