# Andy Yun

hongjunyun
Website: https://git.io/JXa1p
GitHub: https://git.io/JXaXP
Email: andy.yun@uwaterloo.ca
Phone: 226-507-9755

## Skills

**Programming Languages:** C, C++, JavaScript, Python
**Platform/Devices:** AWS, GCP, Linux, UNIX, MQTT, PLC, GPGPU, CUDA, JSON, SVN, CARLA, Unreal Engine 4
**Framework/Library:** Node.js, Express.js, WebSocket, PySide2, TensorFlow, PyTorch, OpenCV, Boost Python

## Experience

**6G R&D Co-op**
**Huawei -** Kanata, Canada — September 2022 – December 2022

- Developed API for internal use, called from **Python** and communicates with Carla Server using **C++** and **Boost**
- Created the **GUI** using **Python** for the 6G R&D department to monitor and control **the Unreal Engine** simulation
- Designed and created a new **ray tracing** technology that can detect the objects that are reflecting the light in the **CARLA** simulation to better interpret the real world within the 6G simulation using Unreal Engine 4

**Software Developer Co-op**
**Stackpole International -** Ancaster, Canada — January 2022 – April 2022

- Reduced the communication overhead between PLC and Host computer by 30% by using a caching mechanism
- Built GUI, Machine Learning and telemetry software to reduce the human error involved in the production
- Utilized **Python**, **PySide2, OpenCV, TensorFlow**, and **PyTorch** for Omron PLC and **GPU** servers
- Applied knowledge related to the memory address, binary numbers and other mathematical knowledge while programming for **PLC** controllers through the ethernet connection to ensure the security of communication

**Full Stack Developer**
**TEMS Academy -** Waterloo, Canada — October 2020 – June 2021

- Designed the architecture of a **Web Platform** for the tutors and students to communicate and evaluate on
- Reduced communication overhead by 50%, allowing tutors to focus on lessons rather than filing each student
- Remaining similar or higher level of data confidentiality through user authentication and built-in encryption to control the accessibility of each data compared to traditional filing system using google G-suite
- Constructed a full-stack application that is mobile-friendly, making it suitable for more diverse lessons and ensuring the connectivity with the management system of the company

## Projects

**Logic.Gate Tutoring Platform**
Waterloo, Canada — September 2021 – Ongoing

- In the progress of developing and prototyping a programming education platform for University Students
- The objective is to provide knowledge of programming to first-year students learning to program for the first time, to better equip them for rushing lectures in the programming field
- Directed and implemented the project as both **team leader** and **lead developer**

**Find My Drug Platform**
Waterloo, Canada — October 2022 – Ongoing

- Developed a native mobile application that detects the pill from the image using **React** framework
- Studied multiple **Computer Vision** models and the concept of **Transfer Learning** to achieve the 75% accuracy
- Designed the platform architecture using **AWS**, **MongoDB** and **TensorFlow**

## Education

**University of Waterloo**
Candidate for Bachelor of Applied Science in Computer Engineering — September 2021 – Ongoing

- 2021 University of Waterloo President's Scholarship