**Andy Yun**

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[Contacts Website Url Svg Png Icon Free Download (#504359) -  OnlineWebFonts.COMWebsite](https://andylang8445.github.io/): https://git.io/JXa1p

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Phone: 226-507-9755

**Skills**

**Programming Languages:** C, C++, JavaScript, Python, JSON, ARMv7 Assembly, VHDL, Bash, SQL

**Platform/Devices:** AWS, UNIX, MQTT, PLC, CUDA, SVN, Unreal Engine 4, CARLA, DynamoDB, ARM Cortex-M3

**Framework/Library:** Node.js, Express.js, WebSocket, PySide2, TensorFlow, PyQt, OpenCV, Boost Python, Git, FastAPI

**Experience**

[**Software Backend Developer Hyperlink Icons - Download Free Vector Icons | Noun Project**](https://www.esc-ape.ca/)

June 2023 – August 2023

**Escape Platforms**

* Developed **API** for the platform functionality using **AWS** services, such as **AppSync**, **Lambda** and **DynamoDB**
* Developed vital comment and chat features for a serverless SNS service using **Node.JS** and **APIs**
* **Proposed enhanced database structure** that can handle high demand on acceptable price by utilizing **cache**
* Wrote and deployed unit tests for Node.JS **Lambda** Codes and **mapping** for AppSync to ensure reliability

[**First Robotics Programming and Computing MentorHyperlink Icons - Download Free Vector Icons | Noun Project**](https://frc-events.firstinspires.org/2023/team/7722) **FIRST Robotics Team 7722**

January 2023 – August 2023

* Guided nine high school students in programming embedded software and composing algorithm to meet objectives
* Applied methods to **reduce the sensor noises**, such as bandpass filter, median filter and sensor fusion
* Developed an algorithm that combines gained data to perform autonomous driving and scoring with **93%** success rate
* Experienced **embedded** software, onboard computer vision and **RTOS** programming in electrically noisy environment

**6G R&D Co-op**

September 2022 – December 2022

**Huawei**

* Developed **API** for internal use, called from **Python** and communicated with Carla Server using **C++** and **Boost**
* Created the **GUI** using **PyQt** for the 6G R&D department to monitor and control the **Unreal Engine** simulation
* Designed a new **ray tracing** technology that detects objects interacting with high-frequency radio signal in the **CARLA** simulation better to interpret the real world within the 6G simulation using Unreal Engine 4
* Experienced **large codebases** and how to digest the associated co­mplex logics

[**Software Developer Co-op Hyperlink Icons - Download Free Vector Icons | Noun Project**](https://www.stackpole.com/)

January 2022 – April 2022

**Stackpole International**

* Reduced communication overhead between PLC and Host computer by 30% using a caching mechanism
* Engineered GUI, Machine Learning, and telemetry software, effectively reducing final product defects by 21%
* 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

[**Projects**](https://andylang8445.github.io/timecapsule/projects/)**Hyperlink Icons - Download Free Vector Icons | Noun Project**

October 2022 – December 2023

[**Find My Pill PlatformHyperlink Icons - Download Free Vector Icons | Noun Project**](https://github.com/hyeonjeongkwon/findmydrug)

* Developed and designed RESTful API using Python and Flask to communicate with the Flutter frontend
* Applied **3NF normalization** of database to enhance the response time when handling large data by **23.7%**
* Designed the platform architecture to utilize **microservices** to maximize the reusability of code and stability
* Constructed the **custom recommendation algorithm** to be used when the user entered the portion of the text

**Education**

**University of Waterloo**

September 2021 – June 2026

Candidate for Bachelor of Applied Science in Computer Engineering

* Relevant courses: Algorithms and Data Structures, Embedded Microprocessor Systems, Discrete Math and Systems Programming