Andy Yun

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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, PyQt, 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 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 and created a new **ray tracing** technology that can detect the objects which reflect the light 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
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** where tutors and students can communicate and evaluate on
- Reduced communication overhead by 50%, allowing tutors to focus on lessons rather than filing each student
- Maintained 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 connectivity with the management system of the company

Projects

Find My Pill Platform
Waterloo, Canada — October 2022 – Ongoing

- 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

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

- In the progress of developing and prototyping a programming education platform for university students
- Aimed 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

Education

University of Waterloo
Candidate for Bachelor of Applied Science in Computer Engineering — September 2021 – June 2026

- 2021 University of Waterloo President's Scholarship