

SHUONI XU

226-978-0653 ◇ shuonixu@gmail.com ◇ [linkedin.com/in/shuoni-xu-5b46821ba](https://www.linkedin.com/in/shuoni-xu-5b46821ba) ◇ Portfolio: sharonuu.github.io/

EDUCATION

- **University of Waterloo** Waterloo, ON
Master of Engineering, Electrical and Computer Engineering, GPA: 84/100 Sept 2021 - Dec 2022
- **Changzhou University** Jiangsu, China
Bachelor of Engineering, Software Engineering, GPA: 87/100 Sept 2017- Jun 2021

WORK EXPERIENCE

Planet XR Oct 2022 - Jan 2023
Software Engineer Intern Toronto, Canada

- **Agile Development:** Used agile development and **Jira** as Kanban board, collaborated and code review using **GitHub**;
- **Web App:** Developed and maintained a cross-platform webapp for profile modification and 3D model uploading using **Spring Boot** and **MongoDB**, adopted **Rest API** and **Microservice** architecture to achieve high scalability and performance of the application, resulting in faster processing time compared to the old system, followed **OOP** principles during development and performed code review to ensure high-quality, stable code, increasing the overall reliability of the system;
- **Secure Authentication:** Implemented secure authentication and social login using **JSON Web Token** and **OAuth2.0**.

Volvo Cars Nov 2021 - Dec 2021
Software Engineer Intern (Hackathon) Shanghai, China

- **Car IoT System:** Developed remotely operated vehicle(ROV) system using **Flask** for back-end, **Vue.js** for front-end, and **MySQL** as database, integrated with cars(sensor and audio system) using **Restful API**, implemented a mobile version shortcuts for car automation and allow users to customise driving scenarios, implemented a to-do list function and connected it with car navigation function to **navigate automatically, won first prize in Volvo Hackathon in 2021**;
- **Warning System:** Created weather widget with Weather API, connected with diagnostic system to send warning to users;
- **Data Analysis:** Developed car information(oil usage, vehicle status, etc.) web dashboard using **Vue.js** and **Volvo API**, cleaned and processed data using **Pandas** and **Numpy**, generated car use reports automatically.

Volvo Cars Apr 2021 - Nov 2021
Software Engineer Intern (Research & Development Department) Shanghai, China

- **Web Scraping and Automation:** Developed a fast and configurable **Python(Selenium)**-based application with **XML** scripts, **RESTful API** and other **big data tools(S3, Hive, Redshift, Lambda)** to **automatically** ingest large datasets from multiple sources space(Internal websites, Windows applications, etc) daily, **getting over 80% time saving**;
- **Data Analysis:** Optimize storage and computation by developing **SQL queries** from ODS to DM to support **PowerBI** reports with over 3 billion records using **Redshift**, collaborated with Digital Department and stakeholders to identify and scope the right data architecture for R&D to be used to facilitate analysis of most common car development questions;
- **CI/CD Pipeline:** Built an automated set of **data pipelines** with **Airflow** and deployed it on **AWS** with **docker** to automatically monitor and debug data warehouse **ETL** pipelines to improve data quality.

PROJECTS

Web Development Project: EasyQ Jan 2022 - Apr 2022
Real-time queue system(Group Project of 6 Members) at University of Waterloo

- **Vue.js Framework:** Designed an interactive UI using **Figma**, developed front-end with **Vue.js** and **Bootstrap**, connected with back-end using **Axios**, used **cookie** authentication to authenticate client requests and maintain session information;
- **Deployment and Maintenance:** Deployed the platform on EC2 of **AWS** with **Nginx** and **SSL**.

Linux Program: Camera Installation System for Local Police Sept 2021 - Dec 2021
Course Project at University of Waterloo

- **Path Optimization:** Implemented a virtual map generator with **Python** and short-path program with **C++**, applied **multi-processing** for connected map generation, road crossing calculation, and shortest path selection;
- **Linux IPC:** Implemented inter-process communication in **Linux**, and improved program efficiency through concurrency.

SKILLS

- **Program Language:** Python, Java, C#, C, C++, SQL, JavaScript, Html, CSS
- **Others:** Node.js, Django, React, Next.js, GraphQL, Linux, Git, LaTeX, AWS, Docker, Redis, CMake, Postman