KUNYANG XIE

(+1) 226-581-2915 ◇ kyriexie@outlook.com ◇ kyxie.github.io

EDUCATION

University of Waterloo, Waterloo, Canada — Sep. 2021 - Dec. 2022
MEng in Software Engineering, GPA: 86/100

Univ. of Electronic Sci. and Tech. of China, Chengdu, China — Sep. 2017 - Jun. 2021
BEng in EE, GPA: 3.8/4

EXPERIENCE

Software Engineer — Jan. 2023 - Present
Perle Systems Limited — *Markham, Canada*

- Developed and maintained the Web Manager, a user-friendly web interface for router configuration. Utilized Bootstrap and **jQuery** for the front-end, and C language along with **SQLite** for the back-end, enhancing system stability and optimizing performance.
- Collaborated within an agile team to spearhead the development of a Cloud Router project utilizing **React** and **SpringBoot**. This initiative aimed to establish a cloud-based platform facilitating remote router access, thereby enabling streamlined and secure management of router settings remotely.
- Designed and implemented the router's cloud proxy in Python using the **requests** library. This proxy facilitated secure data exchange between the router and the cloud platform, and was efficiently deployed on the router systems.
- Implemented multi-threading to address the slow response of CLI commands in the cloud-based web manager. This solution resolved request blocking and enhanced inter-thread communication and synchronization, significantly improving command execution speed by **80%**.
- Contributed to the development of a standalone router project, enabling users to access the router web manager without a physical device. Packaged the project using **Docker** for easier distribution and deployment.

Software Engineer — Mar. 2021 - May. 2021
Tsinghua University - Sichuan Energy Internet Research Institute — *Chengdu, China*

- Built a Gantry-style 3D printer, used and optimized open-source **Marlin** firmware, adapting and configuring it to meet the specific requirements of the printer design.
- Implemented the temperature sensor feedback mechanisms using **PID** controllers, ensuring preciser temperature controlling, thereby leading to a notable **10%** decrease in the adhesion rate of modeling materials.

PROJECTS

Turbo Wallet - Money Management App [GitHub] — Jan. 2022 - Apr. 2022

- Led the back-end development team to built a web server based on **Express.js** invoking **RESTful APIs** to respond the requests from the front-end, the project ranked top **3%** in the contest.
- Designed and implemented **MongoDB** database to manage the income and expenditure records of users.

Pedestrian Re-Identification based on Deep Learning Methods [GitHub] — Jan. 2021 - Dec. 2021

- Designed a deep learning model based on **PyTorch** framework, which employed **ResNet-50** as pedestrian's feature extraction method and **Tri-Hard Loss** as metric learning method.
- The **mAP** and **rank@1** index of the model achieve **74.6%** and **80.0%** respectively for UESTC ReID Dataset.

SKILLS

Languages Java, Python, JavaScript, TypeScript, C/C++, SQL, LaTeX
Frameworks Git, Vue.js, SpringBoot, Node.js, Docker, MongoDB, PyTorch