

Kunyang Xie

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EDUCATION

University of Waterloo <i>Master of Engineering in Software Engineering</i>	Waterloo, ON <i>Sep. 2021 – Dec. 2022</i>
University of Electronic Science and Technology of China <i>Bachelor of Engineering in ECE</i>	Chengdu, Sichuan, China <i>Sep. 2017 – Jun 2021</i>
University of Glasgow <i>Bachelor of Engineering in ECE with First-Class Honours</i>	Glasgow, Scotland, UK <i>Sep. 2017 – Jun 2021</i>

EXPERIENCE

Software Engineer <i>Perle Systems Limited</i>	Jan. 2023 – Aug. 2024 <i>Markham, ON</i>
<ul style="list-style-type: none">Developed a web manager for routers built on Debian Linux, featuring a Bootstrap-based frontend, a C-based backend, and an SQLite database, allowing users to generate CLI commands for network configuration in a user-friendly manner.Led the development of a remote router control system, deployed on AWS with a React frontend and SpringBoot backend, serving over 1,000 active users.Designed and implemented a Python-based proxy system on routers, facilitating communication between the cloud and router for remote management, including transmitting HTML/CSS for real-time router status updates.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%.	
Software Engineer <i>Tsinghua University - Sichuan Energy Internet Research Institute</i>	Mar. 2021 – May 2021 <i>Chengdu, Sichuan, China</i>
<ul style="list-style-type: none">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 more precise temperature controlling, thereby leading to a 10% decrease in the adhesion rate of modeling materials.	

PROJECTS

Student Management App for Consultants	Jan. 2024 – Apr. 2024
<ul style="list-style-type: none">Architected and deployed a real-time Student Management App by containerizing the Vue based front-end and SpringBoot based back-end services using Docker, leading to a 15% improvement in system availability through efficient load balancing and resource optimization.	
Turbo Wallet - Money Management App	Jan. 2022 – Apr. 2022
<ul style="list-style-type: none">Led the back-end development to build 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 non-relational database MongoDB to manage the income and expenditure records of users.	

TECHNICAL SKILLS

Languages: Java, Python, C/C++, SQL (Postgres), JavaScript, HTML/CSS, Go, Dart
Frameworks: SpringBoot, Node.js, Express.js, React, Vue, Flutter, Django, PyTorch
Developer Tools: Linux, Git, Docker, Nginx, Kafka, AWS, Redis, MongoDB