KUNYANG XIE (KYRIE)

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EDUCATION

University of Waterloo, Waterloo, ON, Canada — Sep. 2021 - Dec. 2022
MEng in Software Engineering

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

University of Glasgow — Sep. 2017 - Jun. 2021
BEng in EEE with First Class Honors, GPA: 19.2/22

PROJECTS

Turbo Wallet - Money Management App, *Node.js, MongoDB*, GitHub — Jan. 2022 - Apr. 2022

- Developed a money management app which helps us to track household expenses and incomes.
- The leader of back-end, mainly used Express.js framework and interacts with database of MongoDB.
- By adding, editing and deleting the expense and income records, we can record the recent spending and incomes.
- Meanwhile, the app creates a series of charts based on those records to help analyzing economic conditions visually.

Security Cameras Installation System, *Python, C++, CNF-SAT*, GitHub — Sep. 2021 - Dec. 2021

- A system that helps the local police department with their installation of security cameras at traffic intersections.
- Used Python to generate a map contains the details about a city's traffic, such as the roads and intersections, then tried to find the shortest path by employing the Dijkstra algorithm in the city, and finally, we solved the Vortex Cover problem by using CNF-SAT to simulate the whether the installation of cameras can cover all the city streets.
- Implemented multi-threading and parallel processing to run more efficiently.

Pedestrian Re-Identification based on Deep Learning Methods, *PyTorch*, GitHub — Jan. 2021 - Jun. 2021

- Designed a model based on ResNet-50 and TriHard Loss to re-identify the pedestrians.
- Used Market-1501 dataset to train the model and used our self-made dataset UESTC Re-ID Dataset, and Market-1501 to test the model.
- rank@k and mAP index were used for evaluation criteria to assess the accuracy of the model.

INTERNSHIP

Embedded System Intern — Mar. 2021 - May. 2021
Tsinghua University Sichuan Energy Internet Research Institute — *Chengdu, China*

- Built a 3D printer, used Solidworks to design the mechanical structures, some components were printed by another 3D printer.
- Used STM32 to control the motors and other peripherals, and also designed the related PCBs (motor drivers, power source) by Altium Designer.

SKILLS

Languages Java, Python, JavaScript, C/C++, MATLAB, Verilog, LaTeX
Frameworks Git, Node.js, Express, MongoDB, Mocha, PyTorch