Shenghao XU

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Education

The Chinese University of Hong Kong — Hong Kong
Master of Science in Computer Science — *Sep. 2020 – Present*
- A- grade in Master research project
- CGPA: 3.443 out of 4

The Open University of Hong Kong — Hong Kong
Bachelor of Science with Honors in Computer Engineering — *Sep. 2018 – Aug. 2020*
- Graduation with first-class honors
- Award GPA: 3.65 out of 4
- CGPA: 3.59 out of 4

Honors and Awards

Inter-Institutional Competition on Facility Management Project by IFMA — Oct. 2020
- Merit Award

Entrance Scholarship, CUHK — Oct. 2020
Dean's List — Aug. 2020
The Katie Shu Sui Pui Charitable Trust Scholarship — Jun. 2020
Outstanding Student Award — Jun. 2020
The ACEU sponsorship — Apr. 2020
Dean's List — Jul. 2019

Publication

- S. Xu and K. Hung, "Development of an AI-based System for Automatic Detection and Recognition of Weapons in Surveillance Videos," IEEE 10th Symposium on Computer Applications and Industrial Electronics (ISCAIE), 2020, pp. 48-52, doi: 10.1109/ISCAIE47305.2020. 9108816.

Experience

Research and Development Intern — Jul. 2019 – Aug. 2019
YY Inc. — *Guang Zhou, China*
- Participate in the internationalization of the YY apps
- Established an Android live broadcast system based on Real-Time Messaging Protocol

Electronic Engineer Intern — Jul. 2016 – Sep. 2016
Sightseeing Cable Co., Ltd. — *Anhui, China*
- Monitoring the daily operation of electronic instruments
- Maintenance and repair of electronic equipment

Projects

Multi-armed Bandit problems: Design and Implementation
| *Supervisor:Prof. John C.S. Lui* — Sep. 2020 – Present
- Design and implement the topic within the multi-armed bandits (MABs) domain
- Search the ways to improve the MABs algorithm performance
- Propose and implement a multi-armed bandit based collaborative filtering recommender system, named BanditMF

AI-based System for Automatic Detection and Recognition of Weapons
| *Supervisor:Dr. Hung King Fai Kevin* — Aug. 2019 – May. 2020
- Collaborative project with the company named Integrated and The Open University of Hong Kong
- The aim of this work is to develop a low-cost, efficient, and artificial intelligence-based solution for the real-time detection and recognition of weapons in surveillance videos under different scenarios
- The system can detect 7 weapons within 6 categories, including handgun, shotgun, automatic rifle, sniper rifle, sub-machine gun and knife
- At the intersection over union (IoU) value of 0.50 and 0.75, the system achieved a precision of 0.8524 and 0.7006, respectively

Technical Skills

Languages: Python, Java, C/C++, HTML/CSS, LaTeX
Developer Tools: Git, Spyder, VS Code, Visual Studio, PyCharm, IntelliJ
Libraries: pandas, NumPy, Matplotlib

Activities and Voluntary Service

Internet Enterprise Internship for University Students in Hong Kong, Macau and Taiwan	Jul. 2019
Hong Kong University Student Guangzhou Volunteer Service	Oct. 2019
IEEE OUHK Branch activity	Nov. 2018
Lamma Island Fun Day Volunteer Event	Nov. 2017