

Shenghao XU

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EDUCATION

The Chinese University of Hong Kong

Master of Science in Computer Science

Hong Kong

Sep. 2020 – Aug. 2021

- A- grade in Master research project
- CGPA: 3.443 out of 4

Hong Kong Metropolitan University

Bachelor of Science with Honors in Computer Engineering

Hong Kong

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

RESEARCH EXPERIENCES

Multi-armed Bandit problems: Design and Implementation

| *Supervisor: Prof. John C.S. Lui*

Sep. 2020 – May. 2021

- 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

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.
- Shenghao Xu. Banditmf: Multi-armed bandit based matrix factorization recommender system. CoRR, abs/2106.10898, 2021. URL <https://arxiv.org/abs/2106.10898>.**[pre-print]**

EXPERIENCE

Research Assistant

Aug. 2021 – Present

Center of Cyber Logistics, The Chinese University of Hong Kong

Hong Kong

- IoT + Video analysis

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

PROFESSIONAL ACTIVITIES

Journal Reviews:

- ACM Transactions on Information Systems

TEACHING ASSISTANT

DSME 6696BAP1 Advanced Business Analytic Practicum

Fall 2021

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