

# Shenghao XU

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## EDUCATION

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### 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

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### 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

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### 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

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- 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

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### 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

## TEACHING ASSISTANT

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### DSME 6696BAP1 Advanced Business Analytic Practicum

Fall 2021

## TECHNICAL SKILLS

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**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

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**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