

Mr. Hanlin CAI

Website: caihanlin.com

Github: github.com/guanglun2000

Base: Fuzhou, China (350108)

Email: hanlin.cai@ieee.org

Mobile: (+86) 159-0592-5789

D.O.B. Nov. 01, 2002

EDUCATION

- **Fuzhou University (China-Ireland Cooperative Program, Full time at FZU)** Fuzhou, China
Bachelor of Engineering - Automation; CGPA: 3.82/4.00; Rank: Top 10% Sep 2020 - June 2024
Bachelor of Science - Robotics and Intelligent Devices (Maynooth University, Ireland, Combined Degrees)
Courses (All A+): Control System, Digital Systems, Embedded Systems, Signal Processing, System Dynamics, Algorithms and Data Structures, Object-Oriented Programming, Operating System, Engineering Mathematics, Differential Equations, Physics for Engineers

SKILLS SUMMARY

- **Programming:** Python, MATLAB, JAVA, C++, HTML, CSS, JavaScript, SQL, Bash
- **Tools:** GIT, Docker, Conda, Jupyter, Stata, Navicat, OBS, L^AT_EX, EndNote
- **Platforms:** Linux, macOS, Windows, Web, ROS, Cloud, Arduino, Raspberry Pi
- **Languages:** English (Fluent), Mandarin (Native), Hokkien (Native), Japanese (Basic)
- **Soft Skills:** Leadership, Public Speaking, Time Management, Pressure Management

EXPERIENCE

- **Huading Intelligent Manufacturing Technology Co. LTD** Onsite
Embedded Development Intern (Full-time, supervised by SN.ENGR Yuxiong Xia) Feb 2023 - Present
 - **Cloud Database:** Designed a Cloud database to store the data collected by various sensors in industrial scenarios.
 - **Data Visualization:** Utilized JavaScript framework to visualize the instrumentation data on client management panel.
 - **Ratchet PHP WebSocket:** Implemented a WebSocket for low-latency real time exchange of posts and thread updates.
- **Key Lab of Industrial Automation Control Technology and Information Processing** Onsite
Research Assistant (Part-time, supervised by Prof. Zhezhuang Xu) Dec 2022 - Present
 - **RMS Testbed:** Establish and improve a Real-time Monitoring System (RMS) Testbed for IoT cybersecurity research.
 - **Detection Algorithm:** Designed a supervised learning algorithm to identify and classify malicious network traffic.
 - **Management:** Collaborate with Prof. Xu to manage and tutor 6 freshmen & sophomore members in our laboratory.
- **Cambridge Centre for the Integration of Science, Technology and Culture** Remote
Research Intern (Part-time, supervised by Prof. Pietro Liò) June 2022 - Dec 2022
 - **Summer Research programme - Hosted by St. John's College:** Practice basic artificial intelligence theory.
 - **Literature Review:** Completed a 4,000-word report by summarizing over 50 papers in the field of attack detection.
 - **Assessment:** Evaluated as **Excellent Performance** in the research proposal & research report & tech presentation.

PUBLICATIONS

- **Deep Residual Neural Network for Efficient Traffic Sign Detection, First Author:** Accepted by 2023 International Conference on Artificial Life and Robotics (ICAROB 28th), advised by Dr. Chin Hong Wong and Dr. Wei Hong Lim.
- **An IoT Garbage Monitoring System for Effective Garbage Management, First Author:** Accepted by 2022 International Conference on Computer Engineering, Network and Intelligent Multimedia, advised by Dr. Chin Hong Wong.
- **RMS Testbed for IoT Cybersecurity Using Machine Learning Based Approach, First Author:** Working paper, advised by Prof. Zhezhuang Xu, still under working and expect to be finalized in May 2023.

HONORS AND AWARDS

- First Prize Scholarship (**Three Times, ¥15000*3**), Second Prize Scholarship (One Time, ¥10000) of FZU
- First Prize (Fujian Competition Area) in China Undergraduate Mathematical Contest in Modeling - Dec, 2022
- Best Student Project of Maynooth International Engineering College in Academic Year (Teamwork) - Oct, 2022
- Third Prize in China National College Student Computer Design Competition (Electronic Track) - Aug, 2022
- Champion of 100-meter Freestyle Swimming Competition of Fuzhou University - June, 2022

VOLUNTEER EXPERIENCE

- **Deputy President of Volunteer Department, Youth League Committee of FZU** Fuzhou, China
Took charge of the planning, operation, and publicity of FZU's volunteer service work. Sep 2021 - Sep 2022
- **Top 10 Best Volunteers (Only 10/30000) of the year 2021-2022 at FZU** Fuzhou, China
Organized 39 activities, personal volunteer service time exceeded 240 hours in this year. May 2021 - May 2022
- **Outstanding Volunteer in 44th Session of the World Heritage Committee** Fuzhou, China
During the committee, responsible for 11 volunteer activities with over 890 participants. June 2021 - July 2021