

## Mr. Hanlin CAI

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## EDUCATION

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**Fuzhou University (FZU) (China-Ireland Cooperative Program, Full Time at FZU)** Sep. 2020 - June 2024

*Bachelor of Engineering in Automation (Fuzhou University)*

*Bachelor of Science in Robotics and Intelligent Devices (Maynooth University)*

- **GPA** 3.79/4.00 (Top 10%)
- **Main Courses:** Digital Systems (91/100), System and Control (90/100), Operating System (92/100), Algorithms and Data Structures (90/100), Object-Oriented Programming (90/100), Mathematics (90/100)
- **Course Projects:** Robotics Project (87/100), Signals and Systems Integration Project (92/100)
- **Scholarships:** **China National Scholarship (Top 0.1%)**, First Prize Scholarship (Top 1.72%, **Three Times**) of FZU, Third Prize Scholarship (Top 17.2%, One Time) of FZU

## RESEARCH PROJECTS

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**Member, Exploring Multiple IoT Security Attacks with Machine Learning Based Schemes**

Organized by Cambridge Centre for the Integration of Science, Technology and Culture Department of Psychology, University of Cambridge

*Supervisor: Prof. Pietro Lio'*

Jul. 2022 - Present

- Responsible for the design and improvement of related machine learning algorithms, simulation testing of IoT experiments, and the collection and preprocessing of experimental datasets, etc.;
- Master basic machine learning algorithms, further study the design principles of IoT security algorithms, and try to apply machine learning methods to prevent IoT security attacks;
- Until to now, have obtained a series of experimental data, and carried out corresponding data preprocessing, preliminary result analysis, and algorithm evaluation;
- Expect to complete the project paper in November 2022.

**Group Member, An IoT Garbage Monitoring System for Effective Garbage Management**

Organized by Maynooth International Engineering College, Fuzhou University

*Supervisor: Chin-Hong Wong*

March - Aug. 2022

- Took charge of the software and hardware interface part of the IoT Monitoring System, thousands of lines of high-quality and efficient code writing, and the technical documentation preparation of this system;
- Grasped the basic knowledge of IoT systems and learned how to connect software with hardware and how to use cloud computing to process IoT-generated data, etc.;
- Penned a paper named An IoT Garbage Monitoring System for Effective Garbage Management and will report on this project as a presenter at CENIM 2022 in November 2022.

## PAPER

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**The First Author, An IoT Garbage Monitoring System for Effective Garbage Management**

- Accepted by CENIM 2022 (IEEE Conference) and will be published in Oct. and presented in Nov. 2022.

## INTERNSHIP

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### New Media Intern, Jinjiang Daotian Xingguang Cultural Creativity Co., Ltd. Jinjiang, China

Supervisor: Xincheng Hong

Jan. 12 - Feb. 28, 2021

- Assisted the leader in carrying out 12 new media projects and organizing on-site activities;
- Responsible for some new media work such as UI design modeling, image beautification, video rendering, audio editing, etc., and produced 7 works in total;
- Participated in the operation of on-site activities, including the construction of technical scenarios in the early stage and settlement of various unexpected problems in the activity process;
- Organized user experience feedback at the later stage of activities and analyzed and sorted out 796 questionnaires in total to help improve user experience and the company's product competitiveness.

## STUDENT WORK

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### Volunteer Department, Fuzhou University Youth League Committee

Deputy President

Sep. 2021 - Sep. 2022

- Took charge of the planning, operation, and publicity of Fuzhou University's volunteer service work, and helped instructors to promote the improvement, digitization and intelligence of Fuzhou University's volunteer service management;
- During the period, organized 39 activities (19 volunteer activities for epidemic prevention and control, 12 for community service, and 8 for environmental protection) with over 890 participants in related activities;
- Responsible for the publicity work of 17 volunteer activities, with a total of more than 240,000 page views, covering more than 40,000 people;
- Personal volunteer service time exceeded 240 hours.

## SKILLS

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CET 6: 475

June 2021

CET 4: 593

Dec. 2022

IT Skills: MATLAB, Java, Python, Git, Arduino, Raspberry Pi, LaTeX, EndNote

Personal Specialty: Swimming (Reach Chinese National Second-level Swimmer Standard)

## AWARDS & HONORS

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Third Prize (Top 5%, <b>Only One Team</b> in Fuzhou University) in China National College Student Computer Design Competition	Aug. 2022
Second Prize (Top 10%) in Fujian College Student Computer Design Competition	June 2022
Third Prize (Top 15%) in the 2022 Mathematical Modeling Competition of Fuzhou University	June 2022
Third Prize (Top 20%, Short Videos Group) in National College Student New Media Competition	May 2022
Excellent Prize (Top 30%) in "The World of English" National College English Vocabulary Contest	Feb. 2022
Merit Student of Fuzhou University	May 2021
Top 10 Best Volunteers of Fuzhou University	April 2022
Excellent Volunteer in the 44th Session of the World Heritage Committee	July 2022
Excellent Volunteer in the 4th Digital China Summit	April 2021