

Yuchen Fang

+86 181 5939 5996 | anxu.fyc@foxmail.com | anxu0101.github.io/note | github.com/Anxiu0101

June 2024 graduate seeking full-time opportunities in AI, Cyber Security & Software Development

Education

3.5/4.0 **Bachelor of Engineering in Software Engineering**, *Expected, Fuzhou University* | Fuzhou, China Sep 2020 - Jul 2024
Class I **BSc Computer Sci & Software Engineering**, *Expected, Maynooth University* Sep 2020 - Jul 2024

Achievements: Second Prize of the National Collegiate Internet of Things Technology and Application Competition, 2021-2022 Academic Progress Award

International Conferences: 38th AAAI Conference on Artificial Intelligence (AAAI-24, Submitted) | The 5th International Conference on Computing and Data Science (CONF-CDS 2023)

Courses: Mathematics | Databases | Computer Architecture | Operating Systems, Comms & Concurrency | Theory of Computation | Programme Languages and Compilers | Computer Networks | Software Verification | Team Project

Skills

Program Golang, Python, Java, Protobuf, Markdown, Git, makefile, LaTeX, Vue, Vim
Research Supervised learning, unsupervised learning, Digital Signature, Tensorflow, Pytorch, Keras, OpenCV
Software Linux, Docker, MySQL, PostgreSQL, Reids, gRPC, Postman, Wireshark, Jira, Mkdocs, Obsidian
Language English(IELTS 6.0), Chinese(Native)

Publication

Fang, Y. (2023). A Research on Different Digital Signature Schemes. *Proceedings of The 5th International Conference on Computing and Data Science (CONF-CDS 2023)*. Accepted.

Cai, H., **Fang, Y.**, Yuan, M., and Xu, Z.* (2023). BLEGuard: Hybrid Detection Mechanism for Spoofing Attacks in Bluetooth Low Energy Networks. *The 38th AAAI Conference on Artificial Intelligence (AAAI-24)*. Available at: <https://easychair.org/publications/preprint/rPPkL>. Under review.

Cai H., Huang, J., **Fang, Y.**, Liu, S., Fan, W., Dan, C., Xu, Z.* (2024). Detecting Multiple-mix-attack in IoT Networks through Reconstruction and Classification Machine Learning Techniques. *Sensors Journal* (IF: 3.847, JCR Q2). Under major modification.

Projects

Defender IOT - Industrial Safety Inspection System Based on Intelligent Internet of Things Mar 2023 - Aug 2023

Head of Software Development Group

- Proposed a solution for factory inspections using robots, with several iterations introducing robotic dogs to cope with complex terrain and unmanned vehicles for flat environments.
- Designed the software part of OpenIoT Hub, including product requirements, full stack architecture, **back-end distributed system** building, interface testing, and performance optimization.
- Won the second prize in the National Collegiate Internet of Things Technology and Application Competition.

School of Civil Engineering Education and Training Platform Jun 2022 - Sep 2022

Back-end Developer, Outsourcing Project

- Collaborated with the front-end developer on this project, which is in continuous operation with over a thousand daily visits.
- Independently completed the back-end of the platform, developed the application using **Golang**, and introduced several features, including activity creation punch cards, grade report generation, and multi-identity permission management for teachers, parents, and students etc.

Experience

Laboratory of Industrial Automation Control Technology and Information Processing Jul 2023 - Present

Research Assistant (Prof. Xu, Z.) | Fuzhou University, China

- Utilised a hybrid detection mechanism based on physical features and machine learning to address security vulnerabilities and susceptibility to attacks in **low-power Bluetooth networks**.
- Built a test-bed for BLE devices, collected data sets via Bluetooth Sniffer and nRF Connect, and simulated an attack detection system using **SVM** and **text-CNN** machine learning models.
- Authored and submitted a paper to the AAAI Conference 2024.

Cryptography, Cybersecurity and Blockchains Online Research Seminar Jan 2023 - Mar 2023

Group Leader | Remote

- Analysed the fundamentals of several digital signature algorithms.
- Completed mid-term and final presentations on digital signatures, submitted an assessment and future outlook on current digital signature technologies, and finally received an A- rating.
- Compared different **digital signature** technologies and their main usage scenarios, application directions and security, and successfully submitted the paper to the CONF-CDS 2023.

Xiamen Yonyou Tobacco Software Co.*Feb 2023 - Jun 2023**Development Intern | Xiamen, China*

- Completed the development of financial management forms under many modules, including asset management, budget management and other modules.
- deeply involved in the development of user modules, and conducted in-depth research, thinking and programming on services such as identity authentication.

Activities

West2Online Studio, Fuzhou University*Sep 2022 - Present**Member of the Golang Development Team*

- Independently completed several projects, including simulated video website backend, chat room backend, and distributed application.
- Completed the School of Civil Engineering Education and Training Platform and FZU helper application as the main developer, providing grade management services for students, and both platforms have over 1,000 daily active users.
- Organised the evaluation of the next Golang team members and advised those evaluated on project structure, code specification and development ideas.

MIEC College Student Union, Fuzhou University*Oct 2021 - Jun 2022**Deputy Head of Learning Department*

- Organised monthly meetings on academic development and student note sharing activities, and completed reports on academic situation analysis.
- Participated in the planning and volunteering of important college events, such as the college's welcome party, speech contests, and postgraduate sharing sessions.

Software Engineering Class, Fuzhou University*Oct 2020 - Jun 2021**Deputy Head*

- Planned class activities, including class icebreakers and multiple group stand-ups.
- Participated in daily classroom management and student rights protection affairs.