Yuxing Liu

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Education

Nanyang Technological University, Singapore **September 2022 – March 2024**
Master of Science Major in Signal processing

Southeast University, China **September 2018 – June 2022**
Bachelor of Engineering Major in Information Engineering

Work Experience

Operating System / Kernel Developement Engineer **Aug 2025 - Present**
Huawei 2012 Laboratories – Central Software Institute, OS Department, openEuler Lab

- Designed and implemented **kernel-level communication optimizations** for data-intensive workloads on openEuler, focusing on performance-critical OS–application paths.
- Applied kernel-space **memory pooling** and communication mechanisms to distributed data processing frameworks (e.g., Flink), enabling system-level acceleration in multi-cluster environments.
- Conducted end-to-end **workload analysis across OS, runtime, and application layers** to identify communication and scheduling bottlenecks.
- Independently delivered the full engineering cycle, including technical design, kernel module development, application adaptation, and validation.
- Built automated benchmarking and validation pipelines, improving reproducibility, resource utilization efficiency, and engineering verification productivity.

AI Software Engineer **May 2024 – Jul 2025**
Huawei Digital Power – R&D Center, Controller Platform, Intelligent PV Controller

- Developed embedded software for PV inverter and energy storage controller systems, focusing on **energy scheduling and power regulation**.
- Implemented core control logic including power dispatching, demand control, and multi-layer scheduling strategies with priority coordination.
- Contributed to the software architecture design of energy scheduling modules for next-generation controller platforms.
- Supported production systems by diagnosing and resolving complex field issues across multiple product generations.
- Led departmental knowledge management initiatives and introduced **RAG-based solutions** to internal knowledge bases.

Python Developer Intern **Aug 2023 – Nov 2023**
Ericsson Nanjing Panda Communications – IND Product Design & Technical Support

- Contributed to the Smart Troubleshooting System (STS) for automated detection and localization of equipment anomalies.
- Developed backend data processing and high-throughput log analysis scripts using asynchronous programming.
- Improved anomaly detection effectiveness through algorithmic and parameter-level optimization.

Software Test Engineer Intern **Jul 2021 – Aug 2021**
Hangzhou Hikvision Digital Technology

- Participated in embedded system validation and automated testing, focusing on stability, performance, and integration.
- Developed Python-based automation scripts for functional and performance testing.
- Gained hands-on experience with Linux-based embedded devices and basic image processing workflows.

Research Projects

Car Cabin Monitering: Driver's Action Recognition—skeleton-based

MSc Student Dissertation Project in NTU

- **Background:** Action recognition is one of the most important tasks in car cabin monitoring. Skeleton-based method is a new trending in Action Recognition area with fast inference speed. Thus, it's worth to explore stable skeleton-based models for driver's action recognition
- conduct research on action recognition methods, especially efficient models
- build prototype and benchmark model on public dataset
- test in real car cabin environment
- Gained proficiency in Python, Pytorch

Non-contact Intelligent Drug-Craving Evaluation System

Leader, Student Research and Training Program in SEU

- Applied theories in the fields such as artificial intelligence, micro-expression and sentiment analysis of speech
- Conducted theoretical feasibility analysis and proposed schemes for optimisation and allocation of resources
- Designed detection methods based on audios and videos and a non-contact intelligent evaluation system targeting users' drug-craving and mental health
- **Keywords:** Micro-expression recognition, Voice emotional signal processing
- Gained proficiency in C++, Python, MATLAB and other programming languages

Research on Feature Extraction Method of Active Target Echo in Reverberation Background

Undergraduate Dissertation in SEU

- **Abstract:**A numerical model of active sonar target echo is constructed based on multi-point echo theory, and the Marine reverberation is modeled and simulated based on Middleton statistical model In the process of the echo signal, the auto-regressive model pre-whitening method is used to suppress the reverberation interference, and the target velocity and scale characteristics are extracted from the echo signal according to the Doppler frequency shift principle and multi-point model
- **Keywords:**Anti-reverberation, Auto-regression model whitening, Doppler frequency shift, Matched filter, Variable sampling
- Gained proficiency in MATLAB

Extracurriculars

Excellence Prize **12/2018**

Of the 2nd SEU National Collegiate Financial Elite Contest and The 4th 'East Money' National Collegiate

Second-class Prize **11/2018**

Of the 16th SEU Challenging CEO Contest, School of Information Science and Engineering.

President of TEDxSEU **06/2020-06/2021**

Organised speeches themed on 'involution', film sharing meetings, TED mini camp and TED circle.

Volunteer of TEDxNTU **09/2022**