Yuxing Liu

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Education

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

- Video Signal Processing
- Real-time DSP Design and Applications
- Image Analysis and Pattern Recognition
- Machine Vision

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

- Digital Signal Processing
- Information Theory and Coding
- Data Structure and Algorithm

Work Experience

Linux Kernel Developer **Aug 2025 - Present**
Huawei 2012 Laboratories – Central Software Institute, OS Department, OpenEuler Lab

- Led performance acceleration for openEuler kernel communication modules, leveraging Memory Pooling and Zero-copy technologies to optimize data transfer and significantly enhance cross-node memory communication efficiency for distributed frameworks (Flink).
- Diagnosed kernel-space communication bottlenecks and optimized algorithm paths through deep analysis of OS-level scheduling and resource consumption, increasing system throughput under high-traffic data loads.
- Constructed an end-to-end automated performance evaluation pipeline using industry-standard benchmarks to achieve production-grade validation of kernel changes, substantially improving server resource utilization.

Focus: Operating Systems, OS for AI, Kernel Communication Optimization, High-throughput Data Load Analysis.

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

- Served as a core developer for the intelligent controller energy scheduling module; spearheaded the design of critical subsystems, including DI (Dry Contact Input) scheduling, to enable millisecond-level real-time power optimization and grid compliance.
- Collaborated on the architecture of multi-strategy coupled scheduling for AI-driven solar-storage power regulation, resolving challenges in real-time collaborative control and synchronization for large-scale embedded devices under complex conditions.
- Investigated and resolved complex firmware-level issues in live-network products, ensuring system stability and reliability in mission-critical, high-availability scenarios.

Focus: Intelligent Real-time Energy Scheduling, AI-driven Power Optimization, Embedded Software Architecture.

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

- Contributed to the Smart Troubleshooting System (STS) by developing high-performance log processing scripts using asynchronous programming, significantly improving data throughput.
- Optimized anomaly detection algorithms and model parameters, enhancing the accuracy of hardware fault identification.

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

- Developed Python-based automated test suites for DVR embedded systems via RESTful APIs, covering data transmission and white-box testing.
- Improved module responsiveness and accuracy using multi-threaded parallel processing and image denoising techniques for motion detection features.

Research Projects

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

MSc Student Dissertation Project in NTU

- Developed skeleton-based action recognition system optimized for embedded deployment on ARM platform with strict power budget constraint
- Conducted end-to-end validation in real vehicle environment, addressing sensor noise, variable lighting, and camera data latency
- Gained proficiency in Python, PyTorch, and embedded model deployment pipelines for resource-constrained platforms

Non-contact Intelligent Drug-Craving Evaluation System

Leader, Student Research and Training Program in SEU

- Designed non-contact intelligent evaluation system combining micro-expression recognition and voice emotional signal processing
- Developed C++/Python feature extraction pipelines for real-time audio/video analysis on limited compute resources

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

Undergraduate Dissertation in SEU

- Constructed numerical models for active sonar target echo extraction using auto-regressive pre-whitening and matched filtering techniques
- Implemented reverberation suppression algorithms in MATLAB, developing expertise in digital signal processing fundamentals directly applicable to sensor data filtering and noise reduction

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**