Xuming Huang

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xuming.ai

Innovative CS undergrad exploring the edge of AI and systems. Passionate about turning bold ideas into research where LLMs meet low-level code. Thrives in boundary-pushing exploration, yet grounded in rigorous execution.

EDUCATION

STANFORD UNIVERSITY **Stanford, CA**
Summer Session Program (CS 107 Comp Org & Sys, CS 161 Algorithms) *Jun 2025 – Aug 2025*
GPA: 4.0/4.0

UNIVERSITY OF WISCONSIN-MADISON **Madison, WI**
Computer Sciences & Computer Engineering *Jan 2025 – Present*
GPA: 4.0/4.0

UNIVERSITY OF SHANGHAI FOR SCIENCE AND TECHNOLOGY **Shanghai**
Computer Science and Technology *Sep 2023 – Dec 2024*
Major GPA: 4.5/4.5

Core Courses: Computer Organization, Operating Systems, Data Structures, Computer Networks, Machine Learning, Artificial Intelligence, Programming Abstractions.

RESEARCH EXPERIENCE

LinuxGuard: AI-Powered Kernel Security Analysis **Madison, WI**
Research Assistant (Supervised by Prof. Remzi Arpaci-Dusseau and Vinay Banakar) *Jan 2025 – Present*

- Built AI pipeline processing Linux commits to generate static analyzers
- Developed RAG-enhanced LLM system achieving 72% precision in kernel vulnerability detection
- Applied ML clustering (K-means, TF-IDF) to derive high-confidence vulnerability anti-patterns

Heterogeneous Task Scheduler for CPU-GPU Systems **Stanford, CA**
Independent Research Project *Jun 2025 – Present*

- Building C runtime system auto-scheduling computational tasks between CPU/GPU
- Implementing CUDA kernels with cuBLAS optimization and memory pooling

Multispectral U-Net Segmentation Research **Shanghai**
Research Assistant (Supervised by Prof. Xing Hu) *Oct 2024 – May 2025*

- Contributed to development of EKU-Net for plant disease segmentation
- Supported experimental setup and analysis on pest/disease region segmentation

Image Classification Algorithm Analysis **Shanghai**
Research Assistant (Supervised by Prof. Dunlu Peng) *Jan 2024 – Jun 2024*

- Compared traditional ML methods (SVM, KNN, Random Forest) with CNN (81.3% accuracy)
- Implemented 2-stage inference using ResMacNet; achieved 13% improvement

INTERNSHIP EXPERIENCE

Apple **Remote**
NLP Algorithm Intern *Oct 2024 – Dec 2024*

- Assisted in improving App Store personalization through NLP-driven search
- Contributed to development of multilingual translation for FaceTime

Cool AI Technology **Shanghai**
Technical R&D, Product Dev & Ops *Jul 2024 – Sep 2024*

- Implemented web interface using Next.js and Tailwind CSS
- Developed backend services with FastAPI for LLM integration
- Contributed to deployment of AI-Hub project

PROFESSIONAL SKILLS

Languages: English (Fluent), Mandarin (Native)
Programming: Python, C/C++, Java, JavaScript
Tools: Git, Linux, Docker
Research: LLMs, Computer Systems/Architectures
Soft Skills: Research Methodology, Technical Writing, Problem Solving

HONORS & AWARDS

- **Presidential Scholarship, USST** – Academic Excellence
- **Merit Scholarships, USST** – Top 5%

EXTRACURRICULAR ACTIVITIES

Flag Football Team **Shanghai**
Team Leader & Quarterback *Oct 2021 – Jun 2024*

Shanghai Wangbo Sports Consulting **Shanghai**
Flag Football Coach & Program Manager *Dec 2021 – Mar 2023*