

# Xuming Huang

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*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

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### STANFORD UNIVERSITY

Summer Session Program (CS 107 Comp Org & Sys, CS 161 Algorithms)

Stanford, CA

Jun 2025 – Aug 2025

### UNIVERSITY OF WISCONSIN-MADISON

Computer Sciences & Computer Engineering

Madison, WI

Jan 2025 – Present

GPA: 4.0/4.0

### UNIVERSITY OF SHANGHAI FOR SCIENCE AND TECHNOLOGY

Computer Science and Technology

Shanghai

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

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### LinuxGuard: AI-Powered Kernel Security Analysis

Research Assistant (Supervised by Prof. Remzi Arpaci-Dusseau and Vinay Banakar)

Madison, WI

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

Independent Research Project

Stanford, CA

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

Research Assistant (Supervised by Prof. Xing Hu)

Shanghai

Oct 2024 – May 2025

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

### Image Classification Algorithm Analysis

Research Assistant (Supervised by Prof. Dunlu Peng)

Shanghai

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

<b>Apple</b> <i>NLP Algorithm Intern</i>	<b>Remote</b> <i>Oct 2024 – Dec 2024</i>
<ul style="list-style-type: none"><li>Assisted in improving App Store personalization through NLP-driven search</li><li>Contributed to development of multilingual translation for FaceTime</li></ul>	
<b>Cool AI Technology</b> <i>Technical R&amp;D, Product Dev &amp; Ops</i>	<b>Shanghai</b> <i>Jul 2024 – Sep 2024</i>
<ul style="list-style-type: none"><li>Implemented web interface using Next.js and Tailwind CSS</li><li>Developed backend services with FastAPI for LLM integration</li><li>Contributed to deployment of AI-Hub project</li></ul>	

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

<b>Flag Football Team</b> <i>Team Leader &amp; Quarterback</i>	<b>Shanghai</b> <i>Oct 2021 – Jun 2024</i>
<b>Shanghai Wangbo Sports Consulting</b> <i>Flag Football Coach &amp; Program Manager</i>	<b>Shanghai</b> <i>Dec 2021 – Mar 2023</i>