

Xuming Huang

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

EDUCATION

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

GPA: 4.0/4.0

Madison, WI

Jan 2025 – Present

UNIVERSITY OF SHANGHAI FOR SCIENCE AND TECHNOLOGY

Computer Science and Technology

Major GPA: 4.5/4.5

Shanghai

Sep 2021 – Jun 2024

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

RESEARCH EXPERIENCE

LLM Kernel Anti-Pattern Detection

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

Madison, WI

Jan 2025 – Present

- Building data pipelines to extract and preprocess kernel commit history for LLM training and evaluation
- Identifying recurring anti-patterns in kernel commits through empirical analysis
- Designing LLM-driven static analysis tool for detecting performance and logic bugs

Benchmarking LLMs on CS537 Tests

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

Madison, WI

Jan 2025 – Present

- Evaluating LLM performance on operating systems concepts
- Developing benchmarking frameworks

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

Predicting NFL Games with Logistic Regression

Independent Researcher

Shanghai

Dec 2023 – Jun 2024

- Designed an Exponential Weighted Moving Average function for EPA calculations
- Created features to capture team performance trends based on EPA metrics, distinguishing between offensive and defensive metrics
- Achieved 63.5% cross-validated accuracy in predicting NFL game outcomes

Statistics to Strategy: Enhancing Play Decisions

Independent Researcher

Shanghai

Oct 2022 – Jun 2024

- Collected play-by-play data, focusing on key variables such as field position and outcomes
- Developed an Expected Points model using Linear Regression to enhance play evaluation
- Applied the EP model to evaluate offensive plays retrospectively, calculating EP_Post to assess actual outcomes
- Provided actionable insights to improve coaching decisions and player training

INTERNSHIP EXPERIENCE

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

PROFESSIONAL SKILLS

Languages: English (Fluent), Mandarin (Native)
Programming: Python, Java, C, JavaScript
Tools: Git, Linux, VS Code, Docker
Research: LLMs, Transformers
Soft Skills: Research Methodology, Technical Writing, Problem Solving

HONORS & AWARDS

- Presidential Scholarship, USST** – Academic Excellence (Oct 2024)
- Merit Scholarships, USST** – Top 5% (Mar 2023, Oct 2022)

EXTRACURRICULAR ACTIVITIES

USST Flag Football Team <i>Team Leader & Quarterback</i>	Shanghai <i>Oct 2021 – Jun 2024</i>
Shanghai Wangbo Sports Consulting <i>Flag Football Coach & Program Manager</i>	Shanghai <i>Dec 2021 – Mar 2023</i>
Rainbow Garden Community Committee <i>Community Engagement Pioneer</i>	Shanghai <i>Oct 2021 – Jun 2024</i>
Shanghai Natural History Museum <i>Visitor Services & Accessibility Assistant</i>	Shanghai <i>Dec 2022 – Apr 2023</i>