Xuming Huang

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https://mac-huang.github.io/

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 — **Stanford, CA**
Summer Session Program (CS 107 Comp Org & Sys, CS 161 Algorithms) — *Jun 2025 – Aug 2025*

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 2021 – Jun 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

LLM Kernel Anti-Pattern Detection — **Madison, WI**
Research Assistant (Supervised by Vinay Banakar) — *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 — **Madison, WI**
Research Assistant (Supervised by Vinay Banakar) — *Jan 2025 – Present*
- Evaluating LLM performance on operating systems concepts
- Developing benchmarking frameworks

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

Predicting NFL Games with Logistic Regression — **Shanghai**
Independent Researcher — *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 — **Shanghai**
Independent Researcher — *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 **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, 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 **Shanghai**
Team Leader & Quarterback *Oct 2021 – Jun 2024*

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

Rainbow Garden Community Committee **Shanghai**
Community Engagement Pioneer *Oct 2021 – Jun 2024*

Shanghai Natural History Museum **Shanghai**
Visitor Services & Accessibility Assistant *Dec 2022 – Apr 2023*