

Yancheng Zhu

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EDUCATION

University of Wisconsin-Madison
Bachelor of Science

Sep 2021 - Dec 2024

Majors: Computer Science, Math

GPA: 3.97/4.00

Relevant courses: Machine Learning, [Algorithmic Game Theory & Mechanism Design](#), Linear Optimization, Integer Optimization, Probability Theory, Algorithm, Operating System, Database

RESEARCH EXPERIENCE

University of Wisconsin-Madison

Mechanism Design

Dec 2023 - Present

Undergraduate Researcher

Mentor: [Prof. Jerry Zhu](#), [Prof. Kirthivasan Kandasamy](#), [Dr. Young Wu](#)

- Studying how to design a mechanism without money which tries to ensure social media agents make unbiased reports to their audience.
- Investigating different kinds of penalty for misreporting agents.
- Implemented best-response dynamics to test different types of Nash Equilibria (DSE, Ex-Post, BNE) in different game settings.
- Visualized the game development.

WISCERS Program

Feb 2023 - May 2023

Undergraduate Researcher

Mentor: [Prof. Jerry Zhu](#)

- Reviewed the concept of machine teaching, and implemented several greedy machine teaching algorithms used for regression and clustering.
- Studied the limitations in terms of time complexity of these greedy implementations.
- Reviewed the documents that proved machine teaching to be NP-hard.

Directed Reading Program

Sep 2023 - Dec 2023

Mentee

Mentor: PhD Candidate [Hyun Jong Kim](#)

- Applied ULMFit with [fast.ai](#) libraries to build models used for text classification.
- Presented the result.

PROJECTS

University of Wisconsin-Madison

XV6 mmap

Sep 2023 - Dec 2023

- Studied how an operating system manages free space.
- Implemented system calls mmap and munmap in XV6 using lazy allocation.

Log-structured File System

Sep 2023 - Dec 2023

- Studied the designing principal of file systems.
- Implemented a log-structured FUSE with basic functionalities such as getattr, mknod, mkdir, read, write, and readdir in C.

TEACHING EXPERIENCE

University of Wisconsin-Madison

Math Tutor

Sep 2022 - Present

- Helped students with problems in calculus, linear algebra, and probability at [Math Learning Center of University of Wisconsin-Madison](#).

Discrete Math (Math 240)

Jan 2023 - May 2023

Course Assistant

- Held office hours to explain concepts taught in class and answer students' questions.

PROFESSIONAL SKILLS

Java, Python, C/C++, Gurobi, SQL, Pytorch