# Yiyang (Ethan) Pan

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## EDUCATION

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| **University of Wisconsin Madison** | Madison, WI |
| *BS in Computer Science* | *Sep. 2024 – June 2027* |
| **University of Rochester** | Rochester, NY |
| *BS in Computer Science — Dean's list — Major GPA: 3.9* | *Sep. 2023 – June 2024* |

## TECHNICAL SKILLS

**Languages**: Java (5 years), Python (2 years), C (1 year), JavaScript, TypeScript, HTML/CSS, RISC-V Assembly, MySQL, Lisp
**Tools**: Git, Docker, Google Cloud, Linux, VS Code, JetBrain, Conda, Valgrind, QEMU simulators, gdb debugger, Co-Pilot
**Frameworks & Libraires**: PyTorch (Machine Learning), NumPy, CUDA, Junit5 (Unit Testing), JavaFX, NodeJS, React
**Relevant Coursework**: Data Structures & Algorithms, Computation & Formal System, Computer Organization, Intro to AI

## WORK EXPERIENCE

**Software Engineer** — June 2024 – Aug. 2024
*Coco Tech Co.* — *Shenzhen, China*
- Spearheaded the application of language models; Developed an online AI-based slide creation assistant tool for smart building designers using **Python**, **Ollama**, and **React** frameworks. Successfully reduced slide creation time by 30%.
- Learned concepts of Retrieval-Augmented Generation (**RAG**), **LangChain**, and **prompt engineering** techniques.(*Demo*)

**Teaching Assistant** — Jan. 2024 – May 2024
*University of Rochester* — *Rochester, NY*
- Directed a diverse cohort of 12 students, allocating 6 hours weekly to instruct on **Java**, data structures, and algorithms.
- Designed the workshop with original content and supplemented with Leetcode problems and personalized tutoring to solidify comprehension, resulting in a **20% average grade increase**.

**Research Assistant** — Nov. 2023 – Jan. 2024
*Carnegie Mellon University in Qatar - SIGFUNSAI* — *Remote*
- Managed, labeled, and cleaned over 2000 data points for Language Model fine-tuning, enhancing model performance by 10%
- Translated over 200 HumanEval test cases from object-oriented language into functional language such as **OCaml** to evaluate current models' performance on functional programming.

## PROJECTS

**Exploring Artificial Intelligence in Interactive Gaming** | *LLM, Unity, C#, API* | *(Demo)* — Dec. 2023 – Jan. 2024
- Created a 3D **Unity** demo game showcasing the integration of **language models** for real-time poetry generation based on player input, exemplifying the fusion of **AI** with **gaming**. Strengthening testing and debugging skills.

**Cal-Glass: A Wearable Food Analysis Device** | *Python (OpenCV), AI, HTML, 3D* | *(Demo)* — Nov. 2021 – Oct. 2022
- Led an **8-member** team to develop a wearable diet tracker using **computer vision** and AI, achieving **96.6%** accuracy. Cultivating leadership, team work, and communication skill. The project won a silver award at China's Think Big contest.

## EXTRACURRICULAR

**Wisconsin AI Safety Initiative - Member** — 2024
- Join periodic discussions on AI safety, ethics, and policy and participate in panels on AI safety research.

**Undergrad Project Lab - Member** — 2024
- Participated in a semester-long project to develop a Chrome extension that improves the experience of online learning websites and enhances productivity. Insenfitying techincal and project management skills.

**Google Developer Student Club - Member** — 2024
- Participated in monthly workshops to learn about Google technologies and SWE skills, meet with peers to discuss projects and ideas.

**UR Maker Club - Member** — 2023
- Participated in weekly workshops, learning about embedding system, IoT, **C++**, and computer engineering. Teaching other members Respberry Pi and **Linux** skills. Cultivating analytical and problem-solving skills from hands-on projects.

## AWARDS

**High School Mathematical Contest in Modeling (HiMCM) – Meritorious Award** — 2021
- Developed a customized student job recommendation system using mathematical modeling in Matlab.