

# Jiayue(Melissa) Shi

408-505-8387 | mshi24@illinois.edu | melissashi2002.github.io

## EDUCATION

### The University of Illinois Urbana-Champaign (UIUC)

B.S. in Computer Science with an M.C.S. in Computer Science

*Expected: May 2025*

*Champaign, IL*

### The Pennsylvania State University (PSU)

Major: Computer Science

*Aug 2021 - May 2023*

*University Park, PA*

## RELEVANT COURSEWORK

- Applied Machine Learning
- Software Engineering Development
- Deep Learning
- Natural Language Processing
- Algorithms Analysis
- Database Management
- Artificial Intelligence
- Computer Architecture
- Computational Social Science

## EXPERIENCE

### Course Assistant

*Aug 2024 - Present*

Computer Architecture, School of Computing and Data Science

*UIUC*

- Assisted students with in-class group activities, held regular office hours and conducted exam review sessions.
- Identified performance trends to refine instruction and focus review sessions on key challenges.

### AI Research Intern

*Aug 2023 - Present*

The OnCARE (Online and Connected AI Reflections) Lab

*UIUC*

- Built AI-based chatbot for mental health self-management and caregivers' well-being, using Python and the GPT-4o model to deliver personalized services.
- Leveraged Flask for back-end integration, with JavaScript, HTML, and CSS to create user-friendly interfaces.
- Performed qualitative analysis and thematic analysis.

### Web Developer

*Jan - May 2023*

Penn State Association for Computing Machinery

*PSU*

- Developed PSU ACM's website from design to implementation, focusing on user experience and engagement.
- Utilized debugging, performance optimization, and security protocols to promptly resolve issues, improving website load times, data protection, and ADA compliance.
- Managed dynamic web content, automating updates and ensuring the timely delivery of relevant information.

## PROJECTS

### Zenny - Chatbot for Depression Self-Management | JavaScript, HTML/CSS, Flask

*Feb 2024 - Sept 2024*

- Created Zenny, an LLM-powered chatbot for depression self-management, integrating OpenAI's API to enhance NLP capabilities, user retention, and personalized mental health support.
- Co-led participant interviews to explore interactions with Zenny, and analyzed feedback using qualitative coding to improve chatbot responses.

### Caregivers Mental Well-being | Qualitative Coding

*June 2024 - Present*

- Conducted an extensive literature review on mental health challenges and needs among caregivers.
- Facilitated and conducted interviews with caregivers to explore concerns related to mental health.
- Performed qualitative coding and thematic analysis of interview transcripts to identify key themes and patterns.

### Stock Prediction Website | Python, HTML/CSS, Flask, PyTorch

*Jan - May 2024*

- Collaborated with a team to build a full-stack stock prediction web application, implementing Flask-based RESTful APIs and Python for server-side logic.
- Led front-end development, crafting responsive and accessible user interfaces with HTML and CSS, optimizing performance and user engagement.
- Integrated machine learning models with scikit-learn and PyTorch, utilizing PyTrend and YFinance data within SQL databases.

## PUBLICATIONS

- [P1] Dong Whi Yoo, **Jiayue Shi**, Koustuv Saha. "Chatbots for Mental Health Self-Management: Charting the Potential Harms of LLMs through Values of People with Lived Experiences." Submitted to *CHI 2025*.
- [P2] **Jiayue Shi**<sup>\*</sup>, Keran Wang<sup>\*</sup>, Dong Whi Yoo, Ravi Karkar, Koustuv Saha. "Technology Needs and Practices of Family Caregivers for Mental Wellbeing." Plan to submit to *CSCW2025*.

## SKILLS

**Languages:** C++, Java, Python, SQL, JavaScript, HTML/CSS

**Technologies:** Docker, Django, Flask, RESTful APIs, JSON, PyTorch, LLMs