Jiayue(Melissa) Shi

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EDUCATION

The University of Illinois Urbana-Champaign (UIUC)   *Expected: May 2026*
B.S. in Computer Science with an M.C.S. in Computer Science   *Champaign, IL*

The Pennsylvania State University (PSU)   *Aug 2021 - May 2023*
Major: Computer Science   *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**[*], Keran Wang[*], 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