Ziqi Yang

yangziqi@umich.edu | Personal Website | GitHub Profile | Portfolio

Research Interests

- My research interest lies in human-AI interaction, social computing, and ubiquitous computing.
- I am interested in designing, building, and deploying novel interactive systems that empower people in their work and development in areas including design, engineering, healthcare, and collaborative work.

Education

University of Michigan(UM), Ann Arbor *Aug. 2021 - Present*
M.S. in Information (GPA: 3.9/4.0) Ann Arbor, MI

University of California, Berkeley *Jan. 2021 - May 2021*
Visiting Student (GPA: 4.0/4.0) Remote

Shanghai Jiao Tong University(SJTU) *Sept. 2018 - Aug. 2022*
B.S. in Electrical and Computer Engineering, Minor in Industrial Design (GPA: 3.3/4.0)Shanghai, China

Publications

- **Ziqi Yang**, Jiachen Li, Bingsheng Yao, Xuhai Xu, Nawar Shara, Guodong Gao, Dakuo Wang. 2023. Exploring Large-Language Model for Post-Treatment Cancer Care: Insights from Communication Barriers. (Submitted to CSCW'24)
- **Ziqi Yang***, Xuhai Xu*, Bingsheng Yao, Shao Zhang, Ethan Rogers, Stephen Intille, Nawar Shara, Guodong Gao, and Dakuo Wang. 2023. Talk2Care: Facilitating Asynchronous Patient-Provider Communication with Large-Language-Model. https://arxiv.org/abs/2309.09357 (Submitted to IMWUT'23)
- Yuxuan Li, **Ziqi Yang**, Predrag Klasnja, Mark Newman. 2023. Jennie or Jennifer? A Pre-study of the Effects of Empathy and Personality of Chatbots on Increasing the Intention of Chatbot Continuance.

Research Experience

Graduate Student Research Assistant, Northeastern University *May. 2023 - Present*
Advisor: Professor Dakuo Wang Boston, MA

LLM for Patient-Provider Communication

- **Interviewed** 19 participants about communication challenges during patient-provider communication for older adults at home and opportunities for **Large-Language-Model (LLM)**-powered systems.
- Designed and developed a **LLM-powered system**, Talk2Care, with a **voice assistant** (Alexa Echo with Python **Lambda** function) for patients and an information **dashboard (Figma, React)** for providers.
- Conducted **user studies** for two groups to reveal good system usability, discussed potentials and design implications for LLM-powered systems as a patient-provider communication facilitator and mediator.
- Conducting multi-stakeholder interviews for cancer patients; developing a **full-stack** post-treatment monitoring system utilizing **GPT** and **Llama2** for multi-stage real-world **deployment studies**.

Daily Activity Summary Using Multi-modal Data

- Collecting **multi-modal** activity data from **AI voice assistant** conversations, **smartwatches**(Garmin watch), and **mobile apps** to align data in time series. Analyzing data for **AI agent simulation** and designing effective health interventions.

Graduate Student Research Assistant, University of Michigan *Oct. 2022 - Present*
Advisor: Professor Mark Newman, Professor Pedja Klasnja Ann Arbor, MI

- Designed **scripts and Figma prototypes** for four exercise coach chatbots with empathy and personality traits to investigate their roles in building long-term user-chatbot relationships in health interventions.

- Conducted six pilot **user studies**; performed data analysis on Amazon Mechanical Turk **questionnaire** ratings and **interview** transcripts for user studies to reveal user preferences.
- Planning an exploratory study using technology probes to seek key scenarios for relationship building; developing an **AI chatbot** for Just-In-Time-Adaptive-Intervention to promote physical health.

Student User Experience Researcher, University of Michigan *Aug. 2021 - Dec. 2021*
Instructor: Professor Joyojeet Pal Ann Arbor, MI

- Conducted **survey** and **five interviews** with three major user groups of online apparel company Underground Printing; using **affinity diagrams** to analyze user needs, pain points, and constructed persona.
- Conducted **usability testing** and **heuristic evaluation** for mobile design and ordering experience, and provided design suggestions and implications.

Undergraduate Student Research Assistant, SJTU *May. 2021 - Aug. 2021*
Advisor: Professor Peisen Huang Shanghai, China

- Designed integration and control solutions for a **high-precision camera** on **Automated Guided Vehicles (AGV)** and robotic arm; tested control solutions with Python scripts.

Intern Experience

Product Manager Intern, Red (Xiaohongshu) *Mar. 2023 - June 2023*
Department: Community Ecology Shanghai, China

- **Analyzed statistics** for content **search and distribution algorithms** in the **social media** platform Red; evaluated **Machine Learning** models with precision and accuracy calculation.
- Designed **labeling rules** and **distribution strategy** to boost content quality and user engagement.

User Experience Designer Intern, Microsoft *May 2022 - Aug. 2022*
Department: C+AI Dynamics 365 Shanghai, China

- Designed configuration features and layout for supply chain management with AI using **comparative analysis**, **journey maps** and **user personas**; delivered three mid-fi and hi-fi **prototypes**.

Software Engineer Intern, Hangzhou InfoCore Technology *Aug. 2019 - Sept. 2019*
Department: Research and Development Zhejiang, China

- Implemented Soft-RoCE for multi-tenant **big data cloud backup** solutions; optimized data processing workflows using **Hadoop** ecosystem, including HDFS and MapReduce in **Java, R and Python**

Outreach

Member Society of Women Engineers (SWE) *Sept. 2023 - Present*
Student Peer Mentor UM School of Information *Aug. 2022- Dec. 2022*
Teaching Assistant Intro to Theatre *May 2021- Aug. 2021*
Teaching Assistant Academic Writing I & II *Sept. 2020 - Apr. 2021*
Vice Director UM-SJTU Joint Institute Student Union Tech Department *Oct. 2019 - June 2020*

Honors, Awards & Grants

UM-SJTU Joint Institute Student Development Scholarship *Apr. 2021*
The Mathematical Contest in Modeling (MCM) Successful Participant *Feb. 2021*
SJTU Innovative and Pioneering Project (IPP) Grant (¥8000) *Oct. 2020*

Skills

Programming: Python, C++, Markdown, LaTex, JavaScript, CSS, HTML, SQL, R, Matlab, Shell, Verilog
Framework/Toolkits: React, Django, Hadoop, Android Studio; Raspberry Pi, Arduino
Software: Figma, Adobe Creative Cloud (XD, Illustrator, Photoshop), Miro, Unity, Unreal Engine
Language: Chinese (Native), English (Professional, TOEFL 108), Spanish and Japanese (Beginner)
Coursework: Applied Machine Learning, Networks, AI Interaction Technologies, Probability and Statistics, Data Structure and Algorithms, Online Communities, Accessibility, Sociology, Linguistics