Chenglin Li

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Research Interest

My research interest lies in designing, developing and evaluating multimodal solutions that drive long-term behavioral and workflow transformation. My work focused on studying human workflows and designing interactive systems that leverage multiple modalities to enhance human capability and support real-world tasks.

Education

University of Michigan, Ann Arbor 08/2024 – Present
M.S. Electrical and Computer Engineering (GPA: 4.00/4.00) *Ann Arbor, MI*

University of Michigan, Ann Arbor 08/2022 – 05/2024
B.S. Computer Science (GPA: 3.72/4.00) *Ann Arbor, MI*

University of Washington 09/2020 – 08/2022
B.S. Undeclared Major (GPA: 3.69/4.00) *Seattle, WA*

Research Experience

Human-AI Lab, UMich 05/2025 – Present
Research Assistant *Ann Arbor, MI*
Supervisor: Dr. Anhong Guo

- Introduced In-context instructional videos that fully align with users' real-world visual perception to address visual context misalignment in conventional instructional videos.
- Designed and conducted two user studies across two first-aid and two culinary tasks to examine how visual context alignment in instructional videos affects physical-task performance.
- Analyzed results from an ablation study comparing In-context videos with four visual context attributes *(Task Object Intrinsic, Task Object State, Environmental Context, or Observational Context)*, quantifying their impacts on task completion quality, completion time, and cognitive load.

Soundability Lab, UMich 08/2024 – 09/2025
Research Assistant *Ann Arbor, MI*
Supervisor: Dr. Dhruv Jain & Dr. Venkatesh Potluri

- Developed and evaluated RAVEN, a generative AI-powered system enabling blind and low-vision users to query and modify 3D virtual environments through natural language.
- Conducted user studies with blind and low-vision and deaf and hard-of-hearing participants to examine users' workflow, benefits, and challenges when interacting with the system.

Future Programming Lab, UMich 05/2023 – 01/2024
Research Assistant *Ann Arbor, MI*
Supervisor: Dr. Cyrus Omar

- Developed RustViz2, an interactive visualization tool illustrating Rust's ownership, borrowing, and lifetime concepts; enhanced both front-end SVG animation and back-end functionality using Rust, XML, and JavaScript.
- Evaluated usability through feedback from 61 students and comparative analysis with RustViz1 to assess learning effectiveness and design improvements.

Publications

Yayuan Li*, **Chenglin Li***, Jingying Wang, Filippos Bellos, Jason J. Corso, and Anhong Guo. *Aligning Visual Context in Instructional Videos for Physical Task Assistance: Effectiveness, Attribution, and Feasibility.* under review at **CHI '26**.

Xinyun Cao, Kexin Phyllis Ju, **Chenglin Li**, Venkatesh Potluri, and Dhruv Jain. *RAVEN: Realtime Accessibility in Virtual ENvironments for Blind and Low-Vision People.* **CHI '25 LBW**, **ASSETS '25 Demo**, under review at **CHI '26**.

Work Experience

Mobile App Dev Lab, UMich 05/2023 – Present
Student Assistant *Ann Arbor, MI*
Supervisor: Dr. Sugih Jamin

- Designed and implemented 6 tutorials and 8 projects featuring front-end development in SwiftUI and Jetpack Compose, and back-end servers built with Python, Go, Rust, and JavaScript for EECS 441: Mobile App Development for Entrepreneurs, EECS 398: Intro to Asychronous Reactive Programming, and EECS 498: Mobile App Development .

CSE Department, UMich 08/2024 – Present
Graduate Student Instructor *Ann Arbor, MI*
Supervisor: Dr. Sugih Jamin, Dr. Elliot Soloway

- Mentored 240 students in 7 courses on Mobile App Development.
- Designed and held weekly discussion sessions and weekly Office Hour with 120 students; Created grading rubric and graded labs, tutorials and projects.
- Updated labs, tutorials and projects according to the latest technical features in SwiftUI, Jetpack Compose, Python, Go, Rust and JavaScript.

Technical Skills

Programming Languages: Kotlin, Java, Swift, Python, C/C++, C#, Rust, Go, Dart, JavaScript, SQL (PostgreSQL), R, HTML/CSS
Frameworks & Libraries: SwiftUI, Jetpack Compose, React, Flutter, Flask
Cloud & DevOps: Google Cloud Platform (GCP), Amazon Web Services (AWS)
Developer Tools: Git, Figma, Unity, Arduino, Blender