QING LI

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Education

Ph.D. Student, Human-Centered Computing, University of Florida — May 2027 (expected)
A.S. Programming & Analyzing, Santa Fe College — April 2021
B.A. Chemistry, Central China Normal University — June 2017

Research Experience

Research Assistant — ELX Lab at UF — *Aug 2021 – Dec 2022; Jan 2024 – Present*

- **Data analysis:** Designed and executed controlled user studies on crowdsourcing in education; performed **quantitative analysis** of behavioral and survey data and **qualitative coding** of open-ended responses to identify interaction patterns that informed interface and concept designs promoting a scientific mindset in learners.
- **System development:** Collaborated with engineers and educators to architect and implement a user-friendly **learning-analytics dashboard** enabling students to track progress and learning outcomes; contributed to front-end visualization components and data-pipeline integration.
- **Full-stack research prototype:** Independently designed, proposed, and built a **novel event-based explanation interface** for a web-based movie recommender system (JavaScript, HTML, MySQL); ran a controlled user study on how user motivation moderated responses to system explanations, and **analyzed experimental data** — findings published at AAAI HCOMP.
- **Research synthesis:** Conducted thorough literature reviews on crowdsourcing and explainable AI to scope study designs and ground design decisions in prior work.

Teaching Assistant — University of Florida — *Jan 2023 – Dec 2023*

- CEN 4721 — Human–Computer Interaction
- CEN 3031 — Intro to Software Engineering
- CIS 4301 — Information and Database Systems 1

Publications

Journal

- Rani, N., Chu, S. L., & **Li, Q.** (2021). Exploring User Micro-Behaviors Towards Five Wearable Device Types in Everyday Learning-Oriented Scenarios. *International Journal of Human–Computer Interaction*, 1–16.

Conference

- Guo, X., **Li, Q.**, Smith, S., Zare, A., & Anthony, L. Elicitating Challenges and User Needs Associated with Annotation Software for Plant Phenotyping. *IUI'24*.
- Rao, N., **Li, Q.**, Murphy, S., & Chu, S. L. (2023, July). The Context for Contextualizing — Design Implications for Adaptive Teacher Support Systems for More Relevant Instruction. In *2023 IEEE International Conference on Advanced Learning Technologies (ICALT)* (pp. 71–73). IEEE.
- Chu, S. L., Garcia, B., & **Li, Q.** Relevant Science: An Investigation of How School Teachers Make Science Relevant in the Classroom. *AERA 2023*.
- Thakare, K., Okundaye, O. J., **Li, Q.**, Natarajarathinam, M., Chu, S. L., Kuttolamadom, M., & Quek, F. (2021, July). Design and Development of a Horizontal CTE Curriculum to Prepare Students for the New Manufacturing Economy (Work in Progress). In *2021 ASEE Virtual Annual Conference Content Access*.

- **Li, Q.,** Chu, S., Rao, N., & Nourani, M. (2020, October). Understanding the Effects of Explanation Types and User Motivations on Recommender System Use. In *Proceedings of the AAAI Conference on Human Computation and Crowdsourcing*, 8(1), 83–91.
- Brown, S. A., Chu, S. L., Quek, F., Canaday, P., **Li, Q.,** Loustau, T., … & Zhang, L. (2019, November). Towards a Gesture-Based Story Authoring System: Design Implications from Feature Analysis of Iconic Gestures During Storytelling. In *International Conference on Interactive Digital Storytelling* (pp. 364–373).

Skills

- **Data Analysis:** Quantitative analysis of user-study data (descriptive & inferential statistics), qualitative coding and thematic analysis, survey design, mixed-methods research, usability metrics, and reproducible data pipelines.
- **System Development:** Full-stack web development (JavaScript, HTML/CSS, MySQL); application development in C# and C; interactive dashboard and visualization development; IoT system integration (wearables + mobile + web); database design.
- **Research Methods:** User studies (within- and between-subjects), controlled experiments, semi-structured interviews, prototype design, usability testing, literature review and synthesis.

Professional Services

- Presented research at the AAAI Conference on Human Computation and Crowdsourcing.
- Presented research at the Annual Meeting of the American Educational Research Association (AERA).
- Leading research project in the lab; showcased lab project at academic events.
- Mentored undergraduate researcher on designing a dashboard supporting high-school students' learning progress in an integrated technical course — guiding them through **data analysis** and **system development**.

Recent Awards

CISE Scholarship, University of Florida — April 2023

4th place — UF IoT Design Competition 2021, Gainesville — Sep 2021

Role: Research document writer & system contributor

- Co-designed and implemented an end-to-end **IoT system** integrating wearable sensors, smartphones, and web-based applications to naturally capture users' curiosity moments and visualize them through interactive smartphone/computer dashboards.