

Zijie (Noah) Qu

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Professional Experience

Women's College Hospital & University of Toronto, Postdoctoral Fellow 2026 – Present

- Co-leading a project commissioned by **Ontario Health** to evaluate the implementation of AI-enabled clinical decision support (AI-CDS) tools in Ontario primary care.
- Collaborating with **OntarioMD** and the **Centre for Effective Practice** across complementary workstreams focused on AI-CDS and knowledge-base standard adoption, evaluation, and implementation.
- Designed and conducted a **competitive analysis of seven AI-CDS vendors**, assessing usability, effectiveness and technical performance, and CDS characteristics through structured product testing and vendor documentation review.
- Designed and conducted **controlled simulated clinical encounter studies** using standardized primary care cases, ethnographic observation, and psychometric questionnaires to evaluate usability, trust, perceived workload, CDS information quality, and risks of AI misuse, disuse, and automation bias.
- Designed a **3-month longitudinal evaluation** to assess AI-CDS use in real-world primary care clinics over time, including repeated psychometric measures of usability, clinician experience, workflow integration, trust, and workload, and measures of patterns of appropriate use, misuse, and disuse.

Interactive Media Lab (U of T), Doctoral Researcher 2022 – 2026

- Led **7+ mixed-method human factors research projects** on voice assistants and automated vehicles, designing and conducting controlled experiments, surveys, usability tests, interviews, and field studies to investigate user experience.
- Analyzed survey and experimental data using statistical techniques, including **ANOVA, linear regression, multilevel modelling, and factor analysis** to identify factors affecting user performance, perceptions, and technology adoption.
- Conducted usability testing through **ethnographic observation** and **user interviews**, qualitatively analyzing user experiences and identifying usability issues.
- Recruited representative participant samples through Amazon Mechanical Turk, Prolific, email lists, targeted ads, online forums, and partnerships with two local long-term care homes (Chartwell and Presentation Manor), overseeing ethics, participant recruitment, and on-site data collection for studies with older adults.
- Translated research findings into actionable design recommendations, including restructuring task flows, simplifying instructions, refining error and confirmation messages, and improving accessibility features for interactive systems.
- Published 9 peer-reviewed papers (7 as first author) in key human factors, human-computer interaction, and gerontechnology journals and conference proceedings.

University of Toronto, Instructor 2026 – Present

- Co-instructed MIE242: Foundations of Cognitive Psychology for a class of 110 mechanical and industrial engineering students.

Education

Ph.D. in Industrial Engineering – Human Factors, **University of Toronto** (Canada) 2021 – 2026

M.A. in Digital Direction (Distinction), **Royal College of Art** (UK) 2019 – 2021

B.F.A. in Design and Visual Communication, **Chongqing University** (China) 2014 – 2018

Skills

- **Research:** Experiments; User interviews; Ethnographic observation; Competitive analysis; Usability testing; Heuristic evaluation; Psychometric survey validation; Human factors risk assessment.
- **Design:** Low- and high-fidelity prototyping; Workflow analysis/modeling; Journey mapping; Interaction design.
- **Programming and Tools:** Python; Processing/P5.JS; R; NVivo; Adobe Creative Cloud; Arduino.