Ka I Chan

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Education

Tsinghua University Beijing, China
M.S.E. in Data Science and Information Technology (GPA: 3.97/4.0) 2022.09 – 2025.06 (Expected)
Advisor: Prof. Yuanchun Shi, Pervasive HCI Lab

Tsinghua University Beijing, China
B.S. in Psychology (Major GPA: 3.9/4.0, top 3%) 2018.08 – 2022.06
Honors: Excellent Graduates, Award of Excellence in Academic Performance (top 5%)

Publication & Under Review Manuscripts

| Beyond Digital Privacy: Uncovering Deeper Attitudes toward Privacy in Home Camera among Older Adults
*Weiwei Zhang, Jianing Yin, **Ka I Chan**, Jihong Jeung, Tongxin Sun, TongtongJin, Jiangtao Gong*
International Journal of Human Computer Studies (2024)

| Hemifacial Spasm Patients' Top-Tier Medical Resource Seeking from an Actor-Network Perspective
Submitted to *CHI 2025* as the first author

| Automated Grading Hemifacial Spasm Using Smartphone Cameras
Submitted to *IEEE UIC 2024* as the co-first author

| Human and Algorithmic Visual Attention in Driving Tasks
Submitted to *npj Artificial Intelligence* as the fifth author

Research Experience

Just-in-time Eating Behavior Intervention for Fast Eaters using Earphones 2024.04 – Present
Advisors: Prof. Yuntao Wang (Tsinghua University), Prof. Xuhai "Orson" Xu (Columbia University)
- Collected comprehensive datasets using cameras, earphones, and IMU sensors during eating episodes in both laboratory and real-world settings to define and analyze fast eating behaviors.
- Designed theory-based intervention content and intervention frequency iteratively using Wizard-of-Oz techniques and large language models, and developed an Android app to deliver the interventions.
- Evaluated the implementation of audio just-in-time interventions for fast eaters, assessing immediate, short-term, and long-term effects on eating behaviors and overall health outcomes.

Hemifacial Spasm: from Patient Journey to Automated Medical Grading 2023.06 – Present
Advisors: Prof. Yuntao Wang (Tsinghua University), Prof. Zhicong Lu (City University of Hong Kong)
- Explored how hemifacial spasm patients access top-tier medical resources by mitigating the information and power asymmetries in the patient-doctor relationship in China through semi-structured interviews with both patients and neurosurgeons.
- Established a novel, quantifiable medical grading system by identifying three critical facial features, and developed algorithms capable of automatically grading hemifacial spasm using smartphone cameras through facial keypoint detection and feature point vectors.

Topic Modeling to Explore Financial Behaviors in Bipolar Disorder 2023.08 – 2023.11

Advisor: Prof. Saeed Abdullah (Penn State University)

- Investigated compulsive buying and risk-taking behaviors observed during manic episodes in bipolar disorder by analyzing legal cases through the Harvard Caselaw Access Project API using NLP techniques.
- Utilized topic-guided thematic analysis, LDA, and the ChatGPT to extract and analyze themes from case law related to bankruptcy and bipolar disorder, identifying significant themes and trends in legal cases and developing visualizations illustrating changes in case numbers over time.

Exploring Older Adults' Perception of Home Cameras with Fall Detection 2021.09 – 2023.06

Advisors: Prof. Jihong Jeung, Prof. Jiangtao Gong (Tsinghua University), and Tencent

- Investigated older adults' privacy attitudes towards home cameras via surveys and interviews.
- Gathered insights from older adults on fall detection and emergency response through role-play in the focus group, focusing on two key scenarios based on their post-fall consciousness.
- Explored the connections between older adults' views on privacy, invisibility, concealment, and design language, facilitating their translation of insights into prototypes in a co-design workshop.
- Proposed innovative design guidelines and the PARW Design Model for elder-oriented smart products, emphasizing privacy, stigma avoidance, and user experience.

Impact of LED Masks on People's Communication 2021.09 – 2022.06

Advisor: Prof. Fei Wang, Tsinghua Laboratory of Brain and Intelligence

- Developed an LED mask prototype to explore the potential of LED masks to enhance communication during the pandemic by compensating for the loss of non-verbal cues obscured by traditional masks.
- Designed and conducted two experiments to compare the visual and interactive differences between LED and medical masks via video assessments and real-life conversations, suggesting that LED masks significantly improve interactivity and emotional conveyance.

INTERNSHIP EXPERIENCE

NetEase Games Thunder Fire UX Hangzhou, China

User Experience Researcher for Summer Internship 2021.07 – 2021.08

- Facilitated MMORPG Mobile Games "Chinese Ghost Story", which boasts over 370,000 players.
- Collaborated with game designers and data engineers to enhance player experience via gathering and analyzing player feedback from surveys and interviews.
- Authored 8 reports that analyzed qualitative and quantitative data from over 100,000 players.

SKILLS AND INTERESTS

Research: Qualitative Methods (Interview, Survey, Focus Group, Participatory Design, Thematic Analysis, Grounded Theory), Quantitative Methods (Experimental Design, Statistical Analysis, EEG and Eye-tracking).
Computing: Python, MATLAB, Android app development, HTML/CSS/JS, SPSS, Figma, Arduino, LaTeX.

Language: Fluent English (TOEFL BS106), Native Chinese (Mandarin, Cantonese, Hokkien).
Interests: Volunteering (8 years of experience), Music (Piano with ABRSM Grade 7, Former Percussion Member in THUMB), Powerlifting.