Jiadi (Tian) Luo

jiadil@sfu.ca | 778-319-5785 | Vancouver, BC, Canada
linkedIn GitHub Portfolio

Education

Simon Fraser University | **Burnaby, BC, Canada** **Sep 2018 – Apr 2024 (Expected)**

BSc Computer Science
BSc Health Sciences (Life Sciences Concentration)
CGPA: 3.81/4.33 | President's Honor Roll, 2020-2021 | Dean's Honor Roll, 2019-2023

Experience

HCI Research Assistant **May 2023 – Present**

ixLab | *Supervisor: Lawrence Kim* *Burnaby, BC, Canada*

- Led in-person lab studies involving 16 participants and conducted usability testing to explore the influence of anthropomorphism, robot quantity, and motion patterns on human cognition and emotional responses
- Proficiently programmed and operated C# Unity scripts and Choregraphe for precise control of Toio and NAO robots
- Employed advanced quantitative data analysis techniques in SPSS and found significant relationships between the number of robots and their motion patterns with human task performance
- Developing an innovative AR-based solution to address stage fright in public speaking by using Microsoft HoloLens2 to visually eliminate the audience via different interventions

Web Developer **Sep 2022 – Apr 2023**

7 Sage *Vancouver, BC, Canada*

- Developed and maintained a responsive website that has 200,000+ users utilizing essential web development tools such as JavaScript/React/Vue, HTML, CSS, SASS, WordPress, MySQL, NodeJS, and Docker
- Utilized OpenAI's GPT and embedding techniques via its API, along with cloud vector database PineCone, to develop intelligent search and recommendation algorithms that helped users find pertinent LSAT lessons
- Established and maintained a live classes feature for subscribed users using the WordPress plugin TEC, resulting in a 25% increase in monthly active users
- Enhanced user experience and expedited webpage loading times by 10% via optimizing cache transients
- Collaborated with a team of ten developers and trained new team members for efficient onboarding, boosting team productivity and client satisfaction

Publications

- **Luo, J.**, Domova, V., & Kim, L. H. Impact of Multi-Robot Presence and Anthropomorphism on Human Cognition and Emotion. *The ACM Conference on Human Factors in Computing Systems (CHI'24). (under review)*
- Pulatova, S., **Luo, J.**, Lee, J., Domova, V., Yao, Y., Rajabi, P., & Kim, L. H. SwarmFidget: Exploring Programmable Actuated Fidgeting with Swarm Robots. The ACM Symposium on User Interface Software and Technology (UIST'23). (demo)

Projects (Selected)

Online Multiplayer Game Development | *Java, Socket Programming, TCP Protocol, Multi-threading* **Apr - Aug 2023**

- Led a cross-functional team of five in the development of an online multiplayer game, implementing concurrent gameplay that required players to interact with a shared object while enforcing locking mechanisms
- Designed and orchestrated the complete development of a Java client-server system from the ground up, featuring a custom architecture built on socket programming, TCP protocol, and intricate application-layer messaging
- Leveraged established graphics and GUI libraries to deliver an efficient and user-friendly interface

Multi-threaded Processing System | *Multi-threading, Operating System, Linux, C, Scheduling, Synchronization* **Apr - Jul 2023**

- Developed a multi-threaded program for efficiently processing 16-bit integer inputs from various channels, with the flexibility to apply optional low-pass filters and amplification values to each channel
- Implemented a versatile system for aggregating 16-bit integer samples from input channel files into a single channel, allowing for efficient multi-threaded processing
- Crafted an OS command interpreter that serves as a user-friendly interface for launching, managing, and terminating programs

Web Management System | *MySQL, XAMPP, PHP, JavaScript, Bootstrap 5* **Apr - Aug 2022**

- Designed a SQL database for a simulated strata management company focusing on the data regarding the strata company's properties and management system
- Developed a web application using XAMPP backed by MySQL, PHP, JavaScript, and Bootstrap 5
- Implemented various data relationships including one-to-one, one-to-many, and many-to-many

Technical Skills

Languages: C/C++, C#, Python, Java, JavaScript, HTML/CSS, SASS, SQL, PHP, Rust, Haskell
Research Tools: Usability Testing, Quantitative Research, Survey Design, Heuristic Analysis, SPSS Statistics
Developer Tools: MySQL, TablePlus, XAMPP, MongoDB, Git, Postman, GitHub, Docker, WordPress, OpenAI, NodeJS, React, jQuery, Bootstrap, Unity, IntelliJ, Figma, R, Matlab

Health Sciences Experience

Optician Assistant **May 2021 - Aug 2022**

Grace Eyewear *Burnaby, BC, Canada*

- Assisted optometrists in conducting preliminary vision tests
- Educated patients on eyeglass and contact lens options, assisting them in selecting the most suitable frames and lenses
- Carried out lens edging, cutting, and fitting, ensuring precise and comfortable eyewear
- Managed inventory, tracked orders, and maintained eyeglass displays
- Conducted frame adjustments, repairs, and provided follow-up care to optimize patient satisfaction

Data Analyst **Jul - Sep 2020**

Elderly LeChunXuan Nursing Home *Dalian, China*

- Coordinated data and information on elderly people in the community and assisted them in carrying out physical examinations to observe their physical and mental health
- Promoted the health of the elderly by assisting the community in developing activities and diet lists

Health Sciences Projects (Selected)

Vertebrate Immune Recognition **Jan - Apr 2021**

- Measured and analyzed antibody-antigen binding data using EISA and R statistical for determining antibody-binding affinity to adjuvant
- Collected peripheral blood mononuclear cells isolated from immunized and unimmunized mice using flow cytometry to investigate T cell responses to antigen

Exploratory Strategies in Epidemiology **Sep - Dec 2020**

- Reviewed the concepts and measurements of human population dynamics in epidemiological inference by applying the various epidemiological models
- Studied causes and prevalence of the disease by implementing epidemiological data