# JIADI (TIAN) LUO

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in linkedIn   ⭘ GitHub   🖥 Portfolio

## Education

**Simon Fraser University | Burnaby, BC, Canada**          **Sep 2018 – Apr 2024 (Expected)**
*Double Major:* BSc Computing Science & BSc Health Sciences          CGPA: 3.81/4.33
Relevant Courses: Data Structures/Algorithm, Programming Languages, User Interface Design, AI, Computer Networks

## Experience

**HCI Research Assistant**          **May 2023 – Present**
*Simon Fraser University | ixLab | Advised by Lawrence Kim*          *Burnaby, BC, Canada*
- Led in-person lab studies 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 | Supervised by Alan Cheuk*          *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

**Sociology Project Assistant**          **May 2022 – Aug 2022**
*York University | Advised by Cary Wu*          *Toronto, ON, Canada (Remote)*
- Conducted qualitative and quantitative analyses to interpret and evaluate raw data
- Analyzed statistical data pertaining to gender challenges within the realm of Computer Science

## Publications

- **J. Luo**, V. Domova, & L. H. Kim. 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: passed 1st round as of Nov. 6th, 2023)
- S. Pulatova, **J. Luo**, J. Lee, V. Domova, Y. Yao, P. Rajabi, and L. H. Kim, "Swarmfidget: Exploring programmable actuated fidgeting with swarm robots," in *Adjunct Proceedings of the 36th Annual ACM Symposium on User Interface Software and Technology*, ser. UIST '23 Adjunct. New York, NY, USA: Association for Computing Machinery, 2023. [Online]. Available: https://doi.org/10.1145/3586182.3615806

## Projects (Selected)

**Online Multiplayer Game Development** | *Java, Socket, 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*  **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 and managing 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 and Qualitative Research, Survey Design, Heuristic Analysis, SPSS
**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 lens options, assisting them in selecting the most suitable frames and lenses

**Data Analyst**  **May - Aug 2019**
*Elderly LeChunXuan Nursing Home*  *Lüshunkou, 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

## Awards

President's Honor Roll 2020 - 2021
Dean's Honor Roll 2019 - 2013
Open Scholarship 2020 - 2021