

# Isabelle Kwan

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## Education

### Simon Fraser University

Bachelor of Science in Computing Science (GPA 3.91/4.33)

Burnaby, B.C.

Expected Completion: May 2027

Awards: SFU Entrance Scholarship (with Distinction), CIBC WiCS Award, CSSS Undergraduate Award, Grace Hopper Scholar 2025, Dean's Honour Roll 2023-2025, President's Honour Roll 2024

## Professional Experience

### Research Fellow

University of Waterloo | C#, ARCore, Unity

Sep 2025 – Present

Waterloo. ON.

- Leading research on spatiotemporal data storytelling, synthesizing literature and visualization approaches.
- Prototyping ARCore applications in Unity for 3D spatial interaction and timeline-based data anchoring.
- Integrating multimodal datasets (biographical, temporal, geographic) into early visualization frameworks.

### Software Engineering Intern

Excelar Technologies | Python, Node.js, PHP, PostgreSQL, MySQL, Redis, Docker

Sep 2024 – Apr 2025

Burnaby. B.C.

- Designed scalable APIs, improving access speed by **25%** and supporting seamless user experiences.
- Architected and implemented robust data models and backend systems, optimizing database schemas, reducing redundancy, streamlining data workflows, and enhancing query performance by **20%**.
- Refactored ETL pipelines, increasing data processing efficiency by **15%** and enhancing maintainability.

### Research Intern

SFU Interactive Experiences Lab · NSERC USRA | Javascript, VEGA-Lite, React.js

May 2024 – Sep 2024

Burnaby. B.C.

- Co-authored 2 published Human-Computer Interaction papers on generative AI and self-learning.
- Created scripts to convert user's "study-habits" into interactive visualizations using **VEGA-Lite**.
- Managed 4 projects by facilitating meetings, designing research protocols, and conducting user studies.

## Publications

- Liu, H., **Kwan, I.**, Okuma, T., Loverock, J., Vincent, N., & Chilana, P. (2025). *Understanding AI Literacy for Creatives: Tensions Between Structured Tutorials and Self-Experimentation*. Under review.
- Chaudhury, R., Huffman, C., **Kwan, I.**, Deol, G. S., Dhillon, S., & Chilana, P. K. (2025). *MILESTONES: The Design and Field Evaluation of a Semi-Automated Tool for Promoting Self-Directed Learning Among Online Learners*. CHI 2025. <https://doi.org/10.1145/3706598.3714295>

## Volunteer Experience

### President

SFU Computing Science Student Society

May 2024 – Apr 2025

Burnaby. B.C.

- Effectively managed a team of 15, doubling initiatives and increasing community engagement by **150%**.
- Organized a 5-day Silicon Valley trip for students to network with SFU alumni at large tech companies.
- Led the organization of FROSH Week which hosted 9 events, over **60** volunteers, and **300** participants.

## Technical skills

### Languages Technologies Tools

Python, JavaScript, TypeScript, PHP, Haskell, Rust, Ruby, C, C++, HTML, CSS, x86  
Node.js, React.js, Next.js, Ruby on Rails, Angular, Bootstrap, Tailwind, Flask, PostgreSQL  
Git, Matlab, Microsoft Office, Docker, Figma, Jira