

Jiaqing (Vincent) Hu

Burnaby, BC, Canada | jiaqingh@sfu.ca

kyon317.github.io | github.com/kyon317

linkedin.com/in/jiaqing-hu | [Google Scholar](#) | [DBLP](#)

Research Interests

Visual computing, reinforcement learning, and robotics; character animation and generative motion models.

Education

Simon Fraser University, Burnaby, BC

Doctor of Philosophy (Ph.D.), in progress | September 2026 - Present

Simon Fraser University, Burnaby, BC

Master of Science (M.Sc.) in Visual Computing | September 2024 - May 2026

Simon Fraser University, Burnaby, BC

Bachelor of Science in Computer Science | January 2019 - May 2023

Publications

Calvin Z. Qiao, Benjamin MacAdam, Mohammadarsh Khokhar, Pranav Balaji, **Jiaqing Hu**, and KangKang Yin. 2026. **F3AMD: Fast FiLM-Conditioned Fourier Autoregressive Motion Diffusion**. *Computer Graphics Forum* 45(8), SCA 2026.

[doi:10.1111/cgf.70560](https://doi.org/10.1111/cgf.70560)

Research Experience

F3AMD - Graduate Research Project

Simon Fraser University | January - April 2026

- Conducted extensive ablation studies to evaluate architectural choices in autoregressive motion diffusion for character animation.
- Refactored research code to support the new framework and independently tested the feasibility of alternative designs.
- Organized experimental results, reported findings, and collaborated closely with the research team to inform model development.

Research Assistant - Digital Humanities

Department of History, Simon Fraser University | September 2025 - May 2026

- Supported collection, digitization, and organization of an archive containing more than 50,000 historical documents.
- Built an LLM-based pipeline to extract information and generate document summaries; refined the workflow in response to researcher feedback.

Technical Skills

Programming: Python, C++, Java, SQL, JavaScript/TypeScript, Bash.

Machine learning and vision: PyTorch, NumPy, SciPy, OpenCV, scikit-learn, Hugging Face; diffusion models, motion synthesis, image segmentation, reinforcement learning.

Research and engineering tools: Git, Docker, Linux, LaTeX, Matplotlib; React, REST APIs.

Teaching Experience

Teaching Assistant

School of Computing Science, Simon Fraser University | September 2024 - Present

Current course: CMPT 466 - Computer Animation.

Courses taught as a TA, including previous offerings:

- CMPT 120 - Introduction to Computer Science
- CMPT 276 - Introduction to Software Engineering
- CMPT 310 - Introduction to Artificial Intelligence
- CMPT 361 - Introduction to Visual Computing
- CMPT 466 - Computer Animation
- Led tutorials and office hours, provided programming feedback and debugging support, and coordinated marking practices with instructors and fellow TAs.
- Developed Python and Bash grading tools and test harnesses to automate assignment checks and support consistent feedback.

Selected Research and Technical Projects

Learned Motion Matching

Python, PyTorch, C++, WebAssembly | 2025

- Implemented a learned motion matching pipeline with decompressor, stepper, and projector networks for real-time character animation.
- Explored a diffusion-based projector and integrated trained models with a C++ visualization framework and browser-based demonstration.

SARSAM - Remote Sensing Segmentation

Python, PyTorch, SAM2 | 2025

- Adapted SAM2 for water-body segmentation in synthetic aperture radar imagery; integrated point proposals and mask-boundary refinement for noisy geospatial data.
- Presented the project at SFU's MPCS Innovation Contest in Spring 2025.

Total Recall - Video Event Analysis

Python, PyTorch, OpenCV, React, Docker | September - December 2024

- Built a framework to identify events of interest in long video sequences using vision-language models, including LLaVA-NeXT and Florence-2.
- Applied inference optimizations for consumer GPUs and implemented REST APIs connecting the analysis pipeline to an interactive frontend.

Industry Experience

Software Engineer

Asiacorp, Suzhou, China | July 2021 - July 2023

- Developed an Android application for real-time computer vision using Java, C++, OpenCV, and PyTorch.
- Built a React monitoring interface and REST APIs for an IPFS-based distributed system, supporting resource monitoring and allocation.