

Jerry Wang

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EDUCATION

Bachelor of Science, Major in Cognitive Systems

Expected Graduation: May 2024

The University of British Columbia

- **Coursework:** Software Construction, Data Structures and Algorithms, Designing Cognitive Systems, Research Methods in Cognitive Systems, Relational Databases and Design, Applied Machine Learning, Cloud Computing

TECHNICAL SKILLS

Languages: Java, Python, C#, SQL, html, css, php

Technologies: Unity, Unreal Engine, Maya, MotionBuilder, Peelsolve, Git, Trello, Miro

WORK EXPERIENCE

Sawmill Studios Inc. | Technical Operations Intern

May 2023 – Present

- Contributed to approximately **60%** of the post-production for motion capture data collected for Research and Development projects using **Maya** and **PeelSolve** for data cleaning and solving.
- Authored the documentation overviewing markered, non-markered, and IMU based motion capture.
- Operated a 24 Camera **Optitrack** motion capture system using **Motive** and **PeelCapture**.
- Operation and maintenance of **Rokoko** IMU motion Capture suits for **markerless** motion capture for portable capture sessions.
- Retargeted and Cleaned Rokoko motion capture data in **MotionBuilder**.
- Fixed **all existing hydration bugs** in website prototype built on next.js framework and implemented loading of FBX data library on the webpage using **FBX Loader** from **Three.js** library.

UBC Emerging Media Lab | Software Developer

May 2023 – Present

- Implemented **animation state machines** to handle body and face animations of metahumans for game events in Unreal Engine 5.
- Motion Captured body and face animations using **PoseCam** and **Livelihood** and retargeted and post-processed the data for Metahumans.
- **Debugged** and fixed runtime conflicts for **OpenXR** that reduced instances of crashes by **90%**.

UBC Brain Attention & Reality Lab | Software Developer

June 2022 – May 2023

- Designed and developed projects for virtual reality studies for the Oculus (Meta Quest) and Vive Pro using **SteamVR plugin** on **Unity** and **C#**.
- Operation of a 12 Camera **Optitrack** motion capture system using **Motive**, and crafted a **facial capture** helmet to capture facial motions using an Iphone with the **Livelihood** app.
- Configured Live Streaming of motion capture data from Motive to Unreal Engine using Livelihood and Optitrack Unreal plugin for characters following Unreal's skeleton hierarchy.
- Performed **black box**, **white box**, and **regression testing** for programs built for the lab's SMI eye-tracking modified HTC Vive headsets.

PAPER CONTRIBUTIONS

UBC| Virtual Reality Development and Research Study Design

- Pazhoohi, F., Aoki, K., Wang, J. & Kingstone, A. (forthcoming). Comparing faces in 2D vs 3D.
- Pazhoohi, F., Wang, J. & Kingstone, A. (under review). Comfort Distance for Online and In-person Interactions: A Virtual Reality Study.