CHARLIE HUA

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TECHNICAL SKILLS

Languages: TypeScript, JavaScript, Java, Ruby, Python, C++, SQL, HTML/CSS, VBA
Frameworks and Libraries: React, Redux, Node.js, Express, Ruby on Rails, OpenGL, Blender
Other Tools: GitHub, MongoDB, PostgreSQL, Docker, Datadog**,** Redis, RSpec, JUnit, Capybara

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WORK EXPERIENCE

Co-op Software Developer   **January – September 2023**
Clio | *Ruby on Rails, RSpec, Redis, React*
- Maintained, optimized, and developed for Clio's **Ruby on Rails** payment infrastructure, serving over 150,000 legal professionals in 130+ countries; employed **Redis** caching to enhance system reliability
- Co-developed a new user onboarding process across a team of 40 following **SDLC** procedures to consolidate user data across multiple systems, improving consistency and user experience
- Performed **code reviews** and tracked project progress using **GitHub**
- Built and helped design components of Clio's newest system theme in **React**, including pill buttons and dialog boxes, then showcased them in a company-wide demo with over 200 in attendance
- Developed a new payment acceptance feature – encompassing prototyping, **test-driven development** with **RSpec**, QA, and release – achieving over 50% utilization rate during the first two weeks

Project Leader   **June – December 2015**
Program Office for Laboratory Quality Management, UBC | *PowerBI, Python, SQL, VBA,*
- Led a global multi-lingual survey initiative for over 200 External Proficiency Testing centers to update the World Health Organization's database, ensuring compliance with **ISO standards**
- Developed an interactive **Excel** dashboard and integrated **Power BI** visualizations, enabling efficient data searches and customizable filters
- Automated manual workflows with **Python** scripts and extensively utilized **VBA** macros to create user-friendly interface elements

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PROJECTS

Trip Blueprint: Full-stack Travel Planning Website ↗   **May – July 2024**
Node.js, Express, MongoDB, React & Redux, HTML5, CSS3, ChakraUI
- Developed a dynamic travel-planning platform integrating **Amadeus**, **TripAdvisor**, **Ticketmaster** APIs into a **Node.js** and **Express** backend to deliver a real-time flight, attraction, and event information
- Created a fully responsive frontend design built with **React** that combined **HTML5**, **CSS3**, **ChakraUI**, delivering an optimal user experience across devices
- Employed **MongoDB** and **Redux** persist for data storage and state management, optimizing API response times and load by 60%
- Designed a "I'm Feeling Adventurous" feature that auto-selects a random destination for brave travelers

Path of Gen: Video Game (overall 1st place in class) ↗   **January – April 2024**
C++, OpenGL, Blender, Visual Studio, GitHub
- Developed a **2D sprite-based** collection of minigames using **C++** and **OpenGL** (inspired by Pac-Man, Whack-a-Mole, etc), letting users choose their own story as they follow a pathogen inside the human body
- Implemented a side-scrolling obstacle dodging game using custom **Blender-modeled meshes** and optimized **collisions detection** to achieve 10x faster rendering performance
- Built core engine functionalities (movement, FPS counter), gameplay logic (mesh collisions), and numerous UI/UX enhancements
- Coordinated development via **GitHub** through code reviews and **Agile** practices, ensuring seamless collaboration and timely delivery

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EDUCATION

Bachelor of Computer Science (BCS) University of British Columbia   **November 2024**

Medical Laboratory Science (MLS) British Columbia Institute of Technology   **December 2018**