Charlie Hua 🔗 🔗 🔗

Full Stack Software Developer

Vancouver, Canada • huacg.charlie@gmail.com • 778-833-2433

Profile Summary

• **Full Stack Software Engineer** with experience delivering complex solutions including server optimization and data integration within fast-paced environments.

• Extensive technical skill set, with deep expertise in **Python**, **Java**, and **C++**, solid grasp of **Back-End** frameworks **(Django**, **Node.js**, **Express**), acute knowledge of **cloud services (AWS**, **Google Cloud**, **Azure**), with a focus on building performant, scalable and secure solutions.

• Impactful contributions during each phase of the **Software Development Life Cycle**, including requirements analysis, architecture design, implementation, testing, deployment, and maintenance.

• Engaged collaborator with strong interpersonal skills and well versed in **Agile** methodologies, able to align **cross-functional stakeholders** with conflicting priorities to drive progress under aggressive time constraints.

Education

University of British Columbia	Vancouver, BC
Bachelor in Computer Science (BCS)	Nov. 2024
British Columbia Institute of Technology	Vancouver, BC
Associate in Medical Laboratory Science (CSMLS)	Dec. 2018
University of British Columbia	Vancouver, BC
Bachelor in Medical Laboratory Science (BMLSC)	May. 2015

Technical Skills

Languages: C++, Java, Python, Ruby, JavaScript, TypeScript, SQL, VBA, HTML/CSS
Frameworks & Libraries: Front-End (React, Redux, Angular), **Back-End** (Django, Node.js/Express, Ruby on Rails), Others (OpenGL, Blender)

Databases: Relational (MySQL, PostgreSQL), NoSQL (MongoDB, Redis)
Dev. Tools: Version Control (GitHub, BitBucket), Testing (RSpec, JUnit, Mocha, Jest, Capybara), DevOps (Docker)

Work Experience

Clio Burnaby, BC
Co-op Software Developer Jan. 2023 - Sep. 2023

• Played a pivotal role within the **Software Development Life Cycle**, by designing and implementing secure, reliable and performance systems while delivering clean and scalable code.

• Collaborated within a **cross-functional team** including **Payment Systems**, **Front End Infrastructure**, and **Money Team**, employing **Agile** practices, including daily stand-up meetings and weekly sprints, to deliver software under tight deadlines.

• Engaged with **partners** to understand **business use cases**, gather **technical requirements**, and extract architectural significance for solution design. Conveyed challenges and opportunities in a clear and concise way, adapting the message to each audience's specific technical literacy.

• Refined and progressed Clio's **Ruby on Rails** payment infrastructure for **150,000** legal professionals in **130** countries by integrating **Redis** with LRU eviction and key **Ruby on Rails** patterns like Active Record, Convention over Configuration, and DRY to improve cache performance and ensure system reliability for high-volume transactions.

• Designed and deployed a new payment acceptance feature using **Ruby on Rails**, continuous integration with Clio's proprietary build tool, automated testing, and regression testing, garnering a utilization rate of **50%** within **2** weeks.

• Developed a new user onboarding process with a **40**-member team, integrating Internal **Dashboards** and **Stripe Payment** Processing Logs, applying **Agile** and **DevOps methodologies**, and consolidating user data across platforms to boost data consistency and user experience, achieving **99%** data synchronization accuracy.

• Crafted **UI** components (pill buttons, dialog boxes) for Clio's newest system using **React**, incorporating SOLID and DRY principles, virtual DOM diffing, memoization, and lazy loading, receiving positive feedback from **200** at a company demo.

• Validated software functionality through structured **RSpec,** executing **automated unit testing**, **integration testing**, and **end-to-end testing** to ensure compliance with initial requirements, while aiming for thoughtful tests for common and edge scenarios.

• Deployed using **Blue-Green** Deployment and **Canary Release**, reducing deployment time significantly.

• Monitored and optimized existing software systems by applying refactoring, performance tuning, and report generation, using **Datadog** and internal metrics to track system performance and conducting preemptive fixes to minimize downtime.

• Provided guidance and conducted **code reviews** for fellow developers, while remaining available and accessible to encourage communication and collaboration.

• Responded to payment infrastructure incidents using incident management tools and root cause analysis techniques, accelerating resolution time and enhancing system reliability.

• Delivered **technical presentations** to the team on new designs, features and development plans. Maintained a high engagement in meetings, asking calibrated questions to reach alignment and optimize for delivery.

Program Office for Laboratory Quality Management, UBC
Vancouver, BC

Project Technical Leader
Jun. 2015 - Dec. 2015

• Coordinated a global survey for over **200** centers, updated the **WHO** database to **ISO** standards, engineered a **Power BI**-integrated **Excel** dashboard reducing search time by **70%**, and automated workflows with **Python** and **VBA**.

Software Projects

Trip Blueprint: Full-stack Travel Planning Website 🔗
May 2024 - Jul. 2024

• Constructed a travel-planning platform using **Node.js** and **Express,** integrating **Amadeus**, **TripAdvisor**, and **Ticketmaster APIs** to provide real-time information on flights, attractions, and events, and designed a feature for selecting random destinations.

• Developed a fully responsive frontend design using **React**, integrating semantic elements, local storage **API**s, theme customization, and responsive utilities from **ChakraUI,** resulting in an optimal user experience across multiple devices.

• Implemented **MongoDB** for data storage and **Redux** Persist for state management, optimizing **API** response times and load, improving performance by **60%**.

Path of Gen: Video Game 🔗
Jan. 2024 - Apr. 2024

• Crafted a **2D** sprite-based collection of minigames using **C++** and **OpenGL**, constructing interactive narratives, allowing users to choose their own adventures while exploring a pathogen's journey inside the human body, incorporating **Object**-**Oriented Programming**, **Memory Management**, **texture mapping**, and **shaders**.

• Designed a side-scrolling obstacle dodging game with Blender-modeled meshes, advancing collision detection using optimized bounding box, spatial hashing, and quadtree algorithms, and improving rendering performance by **10x**.

• Created core engine functionalities for movement and **FPS** counter in a custom-built game engine, integrating gameplay logic via mesh collisions, and enhanced **UI/UX** using **Aseprite**.

Miscellaneous Experience

CPA Western School of Business
Sep 2020 - Present

IT Proctor (contractor)
Vancouver, BC

Vancouver General Hospital
Dec 2018 – July 2024

Registered Medical Laboratory Technologist (CSMLS)
Vancouver, BC