

# Ryan Jennings

North Vancouver, BC | [\(778\) 240-3248](tel:7782403248) | [rybertjen@gmail.com](mailto:rybertjen@gmail.com) | [LinkedIn](#) | [GitHub](#)

## Senior Software Engineer | Mobile + Platform Systems | Secure SDLC Specialist

**Strategic Axes:** Product Engineering • Cross-Platform Delivery • Developer Tooling • Scalable Backend • Cloud Infrastructure

Seasoned software engineer with 15+ years of experience in product-oriented development across backend systems, secure mobile and web apps, and scalable cloud infrastructure. Proven ability to lead agile teams, reduce risk through security-driven design, and build high-performing solutions in Python, Kotlin, JavaScript, and cloud-native stacks. Passionate about building modern systems that are resilient, user-centric, and future-ready.

### Core Strengths

**Development:** Python, Kotlin, Java, C#, TypeScript, JavaScript, Swift, Obj/C/C++, Bash

**Fullstack:** Remix (SSR), React (Web + Native), Progressive Web Apps (PWA), Android, iOS, KMP, Tomcat, FastAPI, Node

**DevOps:** Docker, Kubernetes, Ansible, Github Actions, FluxCD (GitOps), AWS, Jenkins, DigitalOcean

**Security:** CSSLP (2025), Pen Testing, AuthZ/AuthN, NMap, Threat Modeling, OWASP, Data Privacy, Burp Suite Proxy, Frida

**Architecture:** Microservices, Clean Architecture, Domain-Driven Design, CI/CD, Infrastructure as Code, Serverless

**AI & Tools:** AIChat, MCP, Agents, Embeddings, Context, Prompt Playgrounds, OLLama, Zapier, Copilot

### Experience

#### Consultant / Founder — Micrantha Software Solutions (Sole Proprietor)

Remote / Vancouver, BC, 2016 – 2023

*Implemented Remix, Python Invoice API, Kotlin, Go, C# Auth API, cloud services, PostgreSQL, and Kubernetes to deliver custom solutions for complex client challenges.*

- Built open-source multiplatform turn-based mobile game with offline AI vision and custom on-device models
- Pioneered on-device AI training and updates for real-time in-store gameplay, cutting network dependency
- Architected lab infrastructure using Kubernetes, Flux, Terraform, and Ansible for blue/green multi-cloud deployments
- Self-hosted Firebase-compatible backend with image vector search to boost matching accuracy and efficiency

#### Lead Software Engineer (Mobile + Platform Security) — Manulife

Remote / Toronto / Boston, 2024 – 2025

*Hired to lead React Native mobile development, authentication, and infrastructure enhancements. Strengthened code quality and team productivity via architecture, agile practices, security, CI, and tech knowledge-sharing.*

- Revamped Expo core and libraries, resolved native issues, unblocked upgrades in 3 months
- Collaborated with app teams to replicate results; Employed Copilot AI to map legacy backend data for UI
- Cut security debt: 5% fewer vulnerabilities, 3% higher risk acceptance; guided upgraded auth backend integration
- Optimized state management and rendering; sped up login, exposed hidden bugs
- Upgraded analytics stack, tightened data assurance, aligned cross-functional needs
- Added survey APIs and full UI/UX rebrand to boost engagement
- Fostered a culture of engineering excellence through architectural guidance.

#### Lead Engineer — OpenArchive (Secure Communications)

Remote / Oakland, CA, 2024

*Led iOS/Android architecture and streamlined app delivery, enhanced UX via refactoring, managed open-source contributions, and aligned distributed teams with exec priorities.*

- Developed open-source iOS/Android app for at-risk users to secure sensitive media
- Fixed UX and file-transfer blockers; introduced reusable UI components

- Established composable mobile architecture to streamline development, boost performance, and cut technical debt
- Scaled team by recruiting and onboarding contractors to meet tight deadlines

### Security Developer (Android) — Atimi Software

Vancouver, BC • 2021 – 2023

*Oversaw application security and performance; conducted pen tests to uncover and remediate vulnerabilities, safeguarding user data.*

- Redesigned financial services app with composable architecture for modularity, scalability, and maintainability
- Coordinated dev, security, and ops to integrate features, optimize performance, and bolster security
- Supported penetration testing with security tools and hands-on exploitation/defense techniques to cut vulnerabilities

### Software Engineer II (Mobile) — Cvent Canada / QuickMobile

Vancouver, BC / Remote • 2015 – 2020

*Enhanced mobile event app: ensured cross-platform compatibility, implemented beacons and analytics, and upheld React/iOS/Android standards.*

- Supported 10k+ concurrent users per conference, boosting event experience and market growth
- Delivered award-winning Android beacon implementation, elevating wireless tech and company profile
- Enabled Cvent acquisition (2017/18) through strategic mobile solutions
- Prototyped live polling with React Native, Couchbase, and PowerPoint for real-time engagement
- Built analytics dashboards for iOS registration, driving data-informed event management

### Earlier Work

<2015

- **ePACT:** Development of Java (Tomcat) backend services, native mobile applications, & automation framework; design of data & APIs to power mobile data sync, dynamic UI, and push notifications
- **Panoramic:** Shipped consumer mobile apps and casual games on Windows and iOS using C++ and C#
- **Novax Industries:** Created GPS configuration tools and test plans; validated in lab, field, and smoke tests
- Built and maintained live backend game server in C supporting thousands of users (avg ~100 peak)

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### Projects / R&D

Ongoing

- **Eyespie:** privacy-first mobile AI with offline visual embeddings and local inference ([repo](#))
- **Garden:** designing database extension (sqlite, pg) for change only peer-to-peer sync protocol using CRDTs over MQTT
- **AI in Practice:** LLM/MCP/Agent automation workflows, prompt evaluation frameworks and mobile model training
- **Security:** MiTM research, obfuscation, disassembly, pen-testing training, and applied offensive-security work

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### Education & Certifications

- **Diploma, Computer Systems** — BCIT, 2020
- **Associate CSSLP (Secure Software Lifecycle Professional)** — ISC2, 2025
- **AWS Certified Cloud Practitioner** — Amazon, 2021
- Additional Certificates (BCIT, Sun Java Developer, Pentesting, Ethical Hacker)

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### ★ Recognitions & Affiliations

- **Awards:** Wireless Technology Award (2017) · BCTIA Emerging Company Award (2011)
- **Innovation:** Transit Pilot – TransLink + City of Chicago (2010)
- **Communities:** OWASP · DEFCON · ISC2 · Vancouver AI Meetup · DCTRL

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*Open to remote or hybrid roles based in Vancouver, BC. Fluent in agile environments with a focus on product, performance, and security.*