

Ryan Jennings

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Software Engineer

Strategic Axes: Backend Development & Infrastructure Modernization | Application & Platform Security | Agile Engineering & Mentorship

Fullstack Developer Specializing in Mobile | Evolving Toward Backend & Software Security | SDLC Security, Pen Testing & Agile Delivery

Accomplished Fullstack Developer specializing in mobile applications, with over 15 years of experience in leading technical teams and delivering high-impact solutions across iOS, Android, and web platforms. Expertise in React Native, mobile security, and architecture optimization, with a proven track record of enhancing user experiences, boosting performance, and mitigating security risks. Adept at driving innovation through open-source contributions, cross-functional collaboration, and hands-on leadership, having contributed to award-winning projects and significant business acquisitions. Passionate about emerging technologies, AI integration, and scalable cloud infrastructure.

CAREER HIGHLIGHTS

- ✓ Earned the 2017 Wireless Technology Award for outstanding participation in the development of an innovative, customizable beacon framework that significantly advanced mobile event experiences at Cvent Canada/QuickMobile.
- ✓ Mentored junior developers on an automation framework, resulting in low-maintenance native mobile and web applications. Designed an efficient mobile synchronization API that drives both the UI and automation, improving overall app performance at ePACT Network.
- ✓ Contributed to the startup's success, leading to the 2011 BCTIA Emerging Company Award, and developing a brandable, customizable mobile app framework now used at Fortune 500 conferences and events, significantly enhancing event engagement at QuickMobile.
- ✓ Led pilot projects for bus priority systems in collaboration with Translink, the City of Chicago, and traffic controllers, advancing technology that resulted in green light optimization, saving time and costs for transit systems at Novax Industries.

PROFESSIONAL EXPERIENCE

LEAD MOBILE ENGINEER | MANULIFE

2024 – 2025

Hired to provide technical leadership in product mobile development with a focus on React Native, authentication, and infrastructure enhancements. Tasked to strengthen code quality and team productivity by contributing to architecture improvements, agile practices, security, continuous integration, and knowledge sharing on emerging technologies (tools, mobile, AI and security trends).

- Revamped core react-native expo framework and related libraries, resolving native issues and unblocking upgrades within first 2-3 months of inheriting project; collaborated with secondary app teams to achieve same results.
- Leveraged Copilot AI tools to analyze intricate legacy backend systems, identifying key data points essential for feature UI development.
- Reduced application security debt by implementing mobile platform mitigations, resulting in a 5% decrease in penetration test vulnerabilities and 3% increase in risk acceptance, improving protection for millions of potential users.
- Improved login performance, reduced load time and exposed hidden bugs by optimizing state management and component rendering; revealed issues with password managers and animations, prompting broader quality improvements.
- Enhanced marketing data insights by upgrading analytics infrastructure, integrating new assurance methods, and aligning with cross-functional teams on data needs, significantly improved data collection.
- Boosted app efficiency and feature delivery by leading the integration of a scalable authorization backend and upgrading frameworks across platforms for better security, performance, and stability.
- Increased user interaction through integration of third-party APIs for surveys and executing a full rebrand to modernize UI/UX.
- Drove engineering best practices through regular pair programming, code reviews, and internal knowledge-sharing presentations that directly influenced the software development lifecycle.

LEAD MOBILE DEVELOPER | OPENARCHIVE

2024

Recruited to lead architectural planning and streamline product mobile app implementation across iOS and Android. Recognized for improving the user experience through code refactoring, managing open-source contributions, and coordinating project delivery across distributed teams while aligning with executive priorities.

- Led the development of a secure, open-source mobile app for iOS and Android, enabling at-risk users to manage and protect sensitive media in high-risk environments.
- Resolved critical UX and file transfer issues, introducing reusable interface components that enhanced usability, reduced bugs, and improved team alignment across platforms.
- Introduced a new mobile architecture that streamlined development, improved performance, reduced technical debt, and defined long-term strategies in collaboration with executive leadership, aligning technical direction with cost efficiency and scalability goals.
- Accelerated development timelines by recruiting and onboarding key contractors, building a high-performing team to drive innovation and meet critical deadlines.

Implemented advanced technologies like Isomorphic React (Remix), Python (Invoice API), Kotlin, Golang, C# (Authorization API), Cloud services, PostgreSQL, and Kubernetes to deliver tailored solutions for diverse client needs. Leveraged technologies to address complex client challenges and enhance system capabilities.

- Spearheaded development of an open-source, turn-based mobile game integrating offline AI vision; leveraged mobile platform computer vision with the camera and customized AI models for efficient offline functionality.
- Pioneered AI model training and device-side updates, discovering innovative ways to deploy and train models for real-time in-store updates, improving gameplay experience and reducing dependency on internet connectivity.
- Designing and implementing scalable laboratory infrastructure by advancing Kubernetes skills to enable blue/green deployments across multiple cloud providers using Terraform and Ansible, ensuring high availability and streamlined release processes.
- Self-hosted a Firebase-compatible backend with advanced image vector searching for matching, enhancing image-based search functionality and data efficiency.

NATIVE ANDROID & SECURITY DEVELOPER | ATIMI SOFTWARE

2021 – 2023

Brought on board to ensure the security and performance of applications by overseeing security measures and conducting thorough research. Safeguarded user data and enhanced application functionality through pen testing, identifying and addressing security vulnerabilities.

- Redesigned a major financial services application using composable architecture, enhancing modularity, scalability, and maintainability, which directly improved long-term product flexibility and ease of updates.
- Collaborated cross-functionally with development, security, and operations teams to coordinate features and ensure seamless integration, leading to optimized performance and strengthened security measures across the platform.
- Supported penetration testing efforts by applying foundational skills with security tools to identify vulnerabilities, while actively learning exploitation techniques and defensive strategies on the job to help reduce security risks and strengthen the organization’s security posture.

SOFTWARE ENGINEER II, MOBILE APPLICATIONS | CVENT CANADA (FORMERLY QUICKMOBILE)

2015 – 2020

Joined the development team to enhance the functionality and user experience of mobile event management applications. Contributed to refining the app’s performance by ensuring cross-platform compatibility, implementing Beacons and Analytics features, and adhering to industry standards for React, iOS, and Android technologies.

- Played a key role in innovative projects that enhanced event experiences, contributing to the company’s growth and market recognition, supporting tens of thousands of concurrent users per conference.
- Contributed to an award-winning beacon implementation on Android, recognized for advancing wireless technology, which directly elevated the company's standing in the industry.
- Supported the company's successful acquisition by Cvent in 2017/18, underscoring the strategic value and impact of the mobile solutions I contributed to.
- Prototyped a live polling feature using React Native, Couchbase subscriptions, and PowerPoint, driving real-time audience engagement and contributing to enhanced interactive event experiences.
- Implemented analytics and dashboards for an iOS registration application, providing data-driven insights that significantly improved event management efficiency and decision-making.

LINUX DEVELOPER LINUX MAGIC, WIZARD TOWER IT SERVICES	2015
SOFTWARE ENGINEER, JAVA BACKEND, MOBILE & AUTOMATION EPACT NETWORK	2013 – 2015
MOBILE APPLICATION DEVELOPER QUICKMOBILE	2011 – 2013
DEVELOPER, MOBILE APPLICATIONS (CONTRACT) PANORAMIC SOFTWARE INC.	2010 – 2011
QUALITY ASSURANCE DEVELOPER NOVAX INDUSTRIES	2007 – 2010
GAME DEVELOPER (FREELANCE) OPEN-SOURCE BACKEND APPLICATION	1998 – 2003

EDUCATION

Diploma, Computer Systems British Columbia Institute of Technology	2020
Associate Certified Secure Software Lifecycle Professional (CSSLP) ISC2	2025
AWS Certified Cloud Practitioner Amazon Web Services	2021
Certificate, Computer Systems British Columbia Institute of Technology	2015
Certified Java Developer Sun Microsystems	2009
Associate Certificate, Software Development British Columbia Institute of Technology	2007
Associate Certificate, Information Systems British Columbia Institute of Technology	2007

TECHNICAL SKILLS

Mobile Development:	Android, iOS, React Native, Swift, Objective-C, Kotlin, Java, Compose, KMP (Kotlin Multiplatform), PWA (Progressive Web Apps), Bluetooth LE, GPS, Beacons, MVVM, MVC, Declarative UI, Xcode
Web & Fullstack Development:	JavaScript/TypeScript, C#, .NET, FastAPI, SQL, NoSQL, API, Remix, Redux, JVM (Java Virtual Machine), Node
Software Design & Architecture:	Clean Architecture, Composable, SOLID Principles, Isometric, Functional Programming, Concurrency, Algorithms
Security & Testing:	CSSLP, AuthZ/AuthN, Pen Testing, Threat Models, Frida, JADX, Appium, Selenium, Burp Suite, Bash
DevOps & Infrastructure:	Jenkins, Docker, Ansible, k8s (Kubernetes), AWS, Linux, Terraform, Postgresql/MySQL, CloudFlare, Github Actions
Tools & Platforms:	AI Agents, MCP (Model Context Protocol), JIRA, Git, ZigBee, Embedded Systems, Copilot, OpenAI, OLLama
Groups & Associations:	Vancouver AI Meetup, DCTRL, DEFCON, OWASP, ISC2