

## SUMMARY

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Software engineer and leader with over 15 years of experience in mobile application, browser engine and server development, and over 4 years leading technical teams.

- Experience in all phases of the product development cycle, from concept to product release and sustainment.
- Demonstrated ability to manage complex projects and lead development teams.
- Passionate about creating high quality software experiences for end users.
- A desire to work with humble and creative people, ready to jump in and get things done.

## TECHNICAL SKILLS

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<b>Languages</b>	Java, C/C++, Python, JavaScript, Kotlin
<b>Technologies, Frameworks and APIs</b>	Android Java/NDK, iOS, Chromium, WebKit, Node.js, front-end development, Security, Messaging, WebRTC, Reactive/Rx programming, REST, gRPC, Microservices
<b>Tools</b>	Git, Maven, Gradle, GNU/LLVM toolchains, CMake, IntelliJ, Xcode, NGINX, Jenkins, Fastlane, Docker, NPM, Webpack, Slack, AWS services, CircleCI, Datadog, Kubernetes, Kafka, Consul, PostgreSQL, Oracle
<b>Operating Systems</b>	macOS, Linux, Windows, Android, iOS, QNX

## EXPERIENCE

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**Wealthsimple - Senior Software Developer**  
Toronto, ON

May 2017 - Present

- Responsible for building up a modern Java 8, REST and GraphQL-based microservices stack for back-office infrastructure. This included building common platform libraries, continuous integration pipelines, container-based deployment on AWS infrastructure and frameworks for service observability and monitoring.
- Architected and developed services that integrate with external providers for real-time mutual fund and equity ordering, trade reconciliation and securities pricing. Utilized a wide range of AWS cloud services such as SQS, S3, Lambda, Kinesis/Kafka, PostgreSQL and DynamoDB.
- Spearheaded project to migrate Wealthsimple's Oracle-based brokerage application from an on-premises data center to AWS.
- Led operational support for the back-office engineering team, provided on-call support and root cause analysis of complex integration problems.

**Topology LP - Software Architect**  
Toronto, ON

July 2014 - April 2017

- Developed cross-platform, distributed, peer-to-peer technology for Android, iOS and desktop. Solutions were built to use mesh networks, WebRTC, Bluetooth LE and WiFi-direct connectivity, enabling secure end-to-end, local communication.
- Implemented core technology in a shared cross-platform C++ library, and SDK/application layers on Android with Java and iOS with Swift. Worked on prototyping aspects of the technology with third-party device manufacturers and contributed code back to various open source projects.

- Architected and managed AWS-based services for Apple/Android mobile push, STUN and TURN access and REST APIs, and utilizing Node.js, MySQL and NGINX.
- Created continuous integration and delivery infrastructure utilizing distributed Jenkins, Docker, Maven, Fastlane tools, Slack notifications, Python and Bash scripts.

**BlackBerry - Manager/Team Lead, Browser Development**  
Toronto, ON

June 2012 - July 2014

- Managed a team of 10-15 distributed developers responsible for core web platform, WebKit and browser development for BlackBerry 10 and QNX Connected Car platforms. Had overall responsibility for release decision-making and setting project direction.
- Worked to build a world-class browser development team by interviewing and hiring new people, and leading by example. Managed team performance and worked with senior leadership, reporting status against project plans and commitments.
- Acted as the technical interface for other groups in the company, including user experience, product management and platform teams. Member of security team responsible for ensuring security patches were released in a timely matter.
- Developed key features of the browser and web platform including user interface, multi-process architecture, IPC, C++ to JavaScript bindings, and integration with platform and hardware capabilities.
- Initiated project to bring the Chromium/Blink browser stack to the QNX operating system. Involved in porting various Chromium components like the V8 JavaScript engine and Aura UI framework.

**Research In Motion - Senior Software Developer, Browser**  
Toronto, ON

June 2008 - May 2012

- Technical lead for the 7.x browser release, accountable for new feature development and release stability. Responsible for making architectural decisions and coordinating with other product teams.
- Implemented various components needed for the integration of the WebKit C++ engine into the Java application runtime in the 6.0 device software.
- Led development of all user-facing features of the browser application, including new user interface components and user interaction. Introduced new features like tabbed browsing.

**Research In Motion - Technical Lead, Instant Messaging Apps**  
Mississauga, ON

February 2007 - June 2008

- Lead developer of instant messaging applications for BlackBerry, including BBM/BlackBerry Messenger as well as clients for Google Talk, Yahoo! Messenger and Windows Live Messenger. The number of active BBM users increased from 4 to 15 million users during this time.
- Completely re-designed and implemented the contact list and conversation user experience, and added support for contact pictures and file transfers. Components were built into a Java library that was reused across different instant messaging applications as well as the SMS/texting application's conversation view.

**Research In Motion - Software Developer, Applications**  
Mississauga, ON

May 2004 - February 2007

- Designed and implemented new Java server-side push functionality in MDS as part of the BlackBerry Enterprise Server.
- Developer on the BlackBerry MDS Runtime product, a rapid application development platform written in Java, capable of executing applications composed of XML markup and JavaScript. Implemented the JavaScript host environment, threading model, application model and form builder, and user interface components.
- Submitted and granted numerous patents related to mobile technology.

## **EDUCATION**

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**University of Waterloo - Bachelor of Applied Science (BASc), Electrical Engineering**

1999 - 2004