

Reid Main

reidmain@gmail.com

Waterloo, Ontario, Canada

Summary of Qualifications

- 15+ years developing apps using Swift, Objective-C, UIKit, and SwiftUI for iOS 3 through 18.
- Founding member of Uber's Mobile Platform team who oversaw the modularization of Uber's iOS architecture which allowed it to scale from 10 engineers to over 180 in just 20 months.
- Deep familiarity with iOS networking ranging from code generation of models and services from IDLs (such as Protobuf and Thrift) to real-time streaming via web sockets and gRPC.
- Proficient at gathering analytics and logging data to enable real-time monitoring of apps in production environments and ensure that they are always healthy and reliable.
- Leveraging unit, snapshot, and integration tests in continuous integration environments at scale to catch crashes and bugs before they reach production.
- Strong track record of onboarding and mentoring junior engineers to become confident, self-sufficient individual contributors.

Experience

Staff Software Engineer • [Square](#) • Toronto, Ontario

June 2022 to June 2024 • FinTech • 12,000+ Employees

- Inherited ownership of Square's crash, error, and analytics reporting pipelines for iOS.
- Finalized the rollout of the latest analytics framework, leading subsequent iterations to improve the mobile developer experience.
- Designed and implemented a unified logging framework, allowing iOS developers to log strongly typed events that can be multiplexed to a variety of sources (BugSnag, Datadog, CDP, debug console, etc).
- Improved the fidelity of crash and error events to aid developers in triaging them, while formalizing a process to ensure high volume / noisy events are addressed promptly.
- Added support for Datadog and MetricKit and enabled developers to create real-time alerts based on the data collected.
- Implemented a network interceptor pattern to enhance gathered HTTP request metrics while also enabling them to be sent to other sources, such as Datadog.

Senior Software Engineer II • [Instacart](#) • Toronto, Ontario

October 2020 to April 2022 • Grocery Delivery • 2,000+ Employees

- Integrated gRPC into the shopper iOS app to prevent the creation of error-prone network services.
- Wrote a custom Protobuf plugin for [Apple's SwiftProtobuf framework](#) to generate idiomatic Swift 5 code.
- Migrated over 50% of daily network traffic in the shopper iOS app to gRPC.
- Helped standardize the processes of internationalization and localization across all of Instacart's apps.

Senior Software Engineer • [Uber](#) • San Francisco, California

January 2019 to October 2020 • Ride Sharing • 20,000+ Employees

- Integrated gRPC into the rider iOS app to decrease latency of on-trip updates.
- Improved developer experience of custom tooling that generates Swift code from backend Thrift files.
- Designed and oversaw the onboarding of mobile engineers to [Uber's RIB architecture](#).
- Oversaw the deprecation of iOS 9, 10, and 11.
- Assisted in the migration of all iOS apps to Uber's in-house dependency injection solution, [Needle](#).

Member of Technical Staff • [Anchorage](#) • San Francisco, California

July 2018 to December 2018 • Digital Asset Custody • 20+ Employees

- Helped ship the soft launch of Anchorage's consumer iOS app.
- Leveraged Apple's Secure Enclave to facilitate cryptographically secure transactions between the iOS app and offsite hardware security modules.

Senior Software Engineer • [Affirm](#) • San Francisco, California

June 2016 to July 2018 • FinTech • 200+ Employees

- Lead iOS engineer. Responsibilities included architecting [the iOS app](#), establishing coding best practices, and mentoring junior engineers.
- Adapted reactive programming practices to improve code encapsulation and testability.
- Led migrations to Swift 3 and 4.
- Maintainer of the mobile team's continuous integration environment.

Senior Software Engineer • [Uber](#) • San Francisco, California

September 2014 to June 2016 • Ride Sharing • 2000+ Employees

- Founding member of the Mobile Platform team whose central mission was to modularize Uber's iOS architecture which allowed it to scale from 10 engineers to over 180 in just 20 months.
- Core contributor to the networking layer. Standardized how engineers interacted with the backend to prevent the creation of brittle, boilerplate code. Primarily achieved through a transformation library that enabled safe conversions of network responses to local model objects (similar to [Gson](#)).
- Collaborated with UX designers on a UI component library that allowed iOS engineers to quickly and easily replicate a standardized Uber design across all of its apps.
- Advocated for increased unit and snapshot test coverage and assisted in the set up and maintenance of a continuous integration environment.

Senior Software Engineer • [theScore](#) • Toronto, Ontario

November 2012 to September 2014 • Sports Reporting & Statistics • 100+ Employees

- Led a team of four developers working on [theScore's iOS app](#).
- Rewrote the app's networking and data layers to leverage modern technologies and design practices.
- Collaborated with UX designers to iterate on the app's existing design and functionality.
- Worked with Ruby on Rails developers to ensure REST API endpoints were easily and efficiently consumed by theScore's mobile apps.

Education

Honours Bachelor of Computer Science (Co-op)

[University of Waterloo](#) • Waterloo, Ontario

September 2003 to August 2008