

Summary

- A professional software developer with senior-level engineering experience.
- Programming professionally since 1997. Developing for the iPhone since 2009.
- Focused on quality mobile development, experience also runs the full-stack gamut from mainframe & desktop to web & blockchain.
- Believes in deep collaboration, quality test suites, the importance of accessibility, polished UI, and leaving code, projects, and teams better than I found them.

Primary Languages

Dart & Flutter (since March 2020)
Swift (since August 2014)
Objective-C (since January 2009)

Professional Overview

Method Up LLC - Principal Consultant

06/2011 - present

- Contributed as part of a distributed, agile team to a banking app designed to help renters build their credit history. Flutter, Riverpod, GoRouter, GraphQL, and build_runner were used for the device side while also helping build the GraphQL API using NestJS and TypeScript. Pushed for additional automated testing and static analysis for the Flutter codebase. (10/2022-02/2023)
- Developed features and refactored code for a legacy codebase to handle the logistics of moving military families around the country. Used SwiftUI, Combine, and Structured Concurrency while building off the existing Objective-C classes. Participated in agile processes with the distributed team, including pair programming, mob programming, PR reviews, and retrospectives. MVVM and

some aspects of The Composable Architecture (TCA) were leveraged in the new features. (04/2022 - 09/2022)

- Consulted on the planning and building of an iOS app using Machine Learning (ML) and Computer Vision to provide at-home physical therapy guidance and feedback to users. (10/2020)
- Led part of an internationally distributed team building two new cross-platform apps. One app lets golf pros create profiles, define coaching programs, manage their schedule, book lessons, chat inapp with students, and accept payments; the other app is for consumers to interact with their coach, book lessons, and become involved in family golf programs. Additionally, I helped build some of the companion web and backend/API functionality using ReactJS, Next.js, Material-UI, Algolia, AWS, and Ruby on Rails. Used Dart & Flutter to build iOS and Android applications, along with BLoC, Provider, Streams, GraphQL, Twilio for chat, and Firebase for push notifications. Migrated to Flutter 2.x and null safety during development. Helped to build up testing discipline using unit, widget, and integration tests for Flutter, Jest for React, Cypress for web, and Fastlane + CircleCI for CI/CD. Used Shape Up for our process. (03/2020 04/2022)
- Helped migrate a macOS / AppKit desktop app for customer advisors to a new API source. Worked as part of a set of distributed teams with an in-house RFP library, L10n, SwiftLint, and worked to improve their CI process. (11/2019 01/2020)
- Implemented new features and fixed bugs for a pair of all-Swift iPhone and Apple Watch apps –and an Android app– of a "smart" garage door and IoT-enabled platform. Leveraged JSON, REST, Alamofire, SwiftLint, Fabric, and Firebase. (07/2016 01/2017 & 12/2018 01/2020)
- Built features, fixed bugs, reviewed code, and performed support for a premier travel & dining app (>1.2 million daily users). This is a large, modular app with multiple teams behind it, making heavy use of in-house CocoaPods, Fastlane, and an MVVM architecture with GraphQL (Apollo). A mix of Swift and Objective-C, with IGListKit; moving from PromiseKit to RxSwift. (03/2019 09/2019)
- Served as Sr. Platform Engineer for a focused team to build, document, and test a Blockchain platform that enables businesses to leverage Distributed Ledger Technology (DLT), deploy decentralized apps (dApps), and perform network integration and orchestration, without needing in-house expertise by offering an easy-to-use web interface, microservice APIs, a CLI, and SDKs for a multitude of platforms. Included work primarily with Go (Golang) but also Swift, Ruby, Docker, AWS, PostgreSQL, Redis, Jenkins, Ethereum, IPFS, and more. (09/2018 06/2019)
- Helped build out VoIP features and test coverage for an iOS app as part of a HIPAA-compliant, secure, clinical collaboration platform for intra-hospital communication. (04/2018 09/2018)
- Modernized an iPad app that helps case workers in the human services field manage their caseload on the go. Mentored other staff on Swift and iOS development. Migrated the unit test suite from Kiwi to XCTestCases for improved tool support. Helped resolve production issues related to SQLite/Core Data and Amazon AWS. Added new user-facing features as well as remote logging support around non-fatal errors and warnings. Set up Continuous Integration scripts to run on TeamCity, including scripts for static analysis, generation of API documentation, and automated UI testing using both the XCTest framework and Appium. (01/2017 - 03/2018)
- Resurrected an iPad app that had been dormant since 2012, updating it along with its frameworks for 64-bit devices, modern Objective-C, ARC, GCD, Swift, and iOS 10. The app enables creating, editing, sharing, and managing scientific documents of multiple formats and media types. (02/2016 01/2017)

- Developed new features as part of a distributed team for a home automation / IoT and security application, using Swift, Auto Layout, REST with HAL (Hypertext Application Language), JWT, and OAuth 2. (04/2015 06/2016)
- Took over the development of a business media app. Incorporated YouTube video feed support, kept it up to date with newer iOS versions, and fixed defects. Used both Objective-C and Swift, along with ReactiveCocoa and Core Data, to maintain the app's 5-star rating. (02/2015 05/2017)
- Enhanced an existing restaurant app, updating sign-up screens and tuning support for location services. (02/2015 03/2015)
- Worked as part of a distributed team to create a wellness iPhone app for a health services company. Used Swift and iOS 8 to build against a RESTful JSON API. Features included authentication, dashboard, health assessment, messaging with coaches, and more. Tested using XCTest, KIF, and Jenkins. (08/2014 - 01/2015)
- Added features and enhancements to an iPhone app for auto dealer-to-dealer transactions. Established unit & acceptance tests and Continuous Integration with XCTest, KIF, and Travis CI, respectively. (02/2014 08/2014)
- Created an iOS app that enables content creation, photo-taking, media uploads, and activity streams for business marketing. It leverages RESTful JSON APIs for the above, and supports integration with multiple social networks, both for authentication and sharing. (07/2013 12/2013)
- Performed code reviews for a 5-star rated health industry iPhone app. (06/2013 12/2013)
- Led the development of the iPad client for a gardening app, using iOS 6, Auto Layout, AFNetworking, Core Data, and other tools. The app uses Facebook and platform authentication, JSON APIs, data and content caching in Core Data, image caching, synchronization of garden data with the website, a multitude of scroll views, NSFetchedResultControllers, custom Markdown parsing into attributed strings, and more. (02/2013 - 07/2013)
- Developed many features for an elementary education iPad app, which allows students and teachers to access layered PDF and HTML5 eBooks using third-party frameworks, integrated with the rest of the vendor's system via RESTful web services using MKNetworkKit. (05/2012 05/2013)
- Fixed layout, rendering, and performance issues for an Android app that promotes community businesses. (05/2012 06/2012)
- Built an iPhone app that offers customer discounts at a multitude of retail establishments, using custom authentication, RESTful services with AFNetworking, Facebook integration, Twitter sharing, custom UI elements, geolocation, and mapping services. (05/2012 07/2013)
- Added enhancements and fixed performance and rendering issues for a retail Android phone app. (05/2012 06/2012)
- Performed emergency triage & tuning to alleviate crashes in a troubled iPad application. (01/2012)
- Added functionality and fixes to a JSON-driven Objective-C content delivery- and location-based framework that is used by multiple universal iOS applications in the App Store for things ranging from historical maps to product sales to entertainment and educational venues. (12/2011 – 01/2013)
- Worked as part of a distributed team to complete an iPad app that allows hair salon stylists to perform interactive consultations based on multiple product lines, save client information &

preferences, parse and display various forms of product and service data, and sync customer information directly between devices (using GameKit). (11/2011 - 12/2011)

• Built a new version of an Android app for Google's Marketplace featuring a tabbed interface with list and detail views combined with mapping and tablet support. (07/2011)

Compuware Corporation - Senior Mobile Developer

11/2011 - 05/2012

- Coded for a universal iPhone and iPad app for produce inspection that leverages web services with JSON, Core Data, camera integration, and bar code scanning.
- Constructed native iPhone apps for a construction industry health institute using UIKit to create paged scroll views, tab bars, and rotation animations.
- Integrated Address Book features into an employee referral iPhone application.
- Helped construct apps for internal use and client prototypes using PhoneGap, Sencha Touch, and 3rd party cloud storage SDKs.
- Constructed a Mobile Web app proof of concept that uses HTML5 localStorage to enable offline access to its data store.

• Mowbol LLC – Senior Mobile Developer 08/2011 – 11/2011

- Designed and implemented an iPad app for a professional organization that allows members to browse, download and view publication PDFs and videos. It authenticates via an XML web service, communicates with a RESTful JSON data source using RestKit, performs image caching, data caching, and persistence via Core Data.
- Built a cross-platform entertainment app that uses simple animations, sprites, sound effects, a custom font, and accelerometer data to let users ask yes-or-no questions, shake it, and have answers revealed to them from an onboard data store. Constructed in about three weeks using Lua and the Corona SDK, which allowed for deployment to iPhone and iPad as well as Android phones and tablets.
- Worked with a .NET developer to create a bar code-reading iOS app using MonoTouch (Xamarin) for live event ticket scanning.
- Explored cross-platform game development with Unity 3D for in-house projects as well as for proposals for ports of existing Unity apps.

Pillar – Senior Software Developer

11/2010 - 06/2011

Pillar Technology Group LLC. – (05/2011 - 06/2011)

- Created a Mobile Web version of Pillar's web site using jQuery Mobile as part of a small, distributed team.
- Profiled and optimized loading performance for slower data connections.
- Utilized HTML5, CSS Media Queries and JavaScript to adapt the site to different-sized devices.
- Tested across iOS and Android mobile devices, including both phones and tablets.

Progressive Medical, Inc. - (02/2011 - 04/2011)

- As a Front End-focused developer for Progressive Medical's *PinPointPRO* set of Groovy- & Grailsbased web applications, led the development of standards-compliant, accessible markup and CSS to realize the visual design.
- Developed & optimized JavaScript for user interface behaviors and performance. Tested JavaScript using Jasmine.
- Coded a bookmarklet widget so that it functions smoothly across browsers, platforms, and on top of host pages of varying types.
- Crafted custom charts using CSS and JavaScript that use data stored in HTML tables.
- Researched graphing libraries for other charts, selecting the SVG-based Highcharts library. Implemented and customized it to provide the desired functionality and interaction capabilities across a wide range of environments, ranging from IE7 on Windows to Mobile Safari on iPad.

Mercedes Benz Financial Services - (11/2010 - 02/2011)

- Upgraded their customer-facing app to be universal so it could run customized for the iPad in addition to the iPhone and iPod touch.
- Added Payment Estimator functionality by leveraging SOAP services via WSDL2OBJC, and remote image access & caching.
- Implemented localization (L10n) support for the addition of a Canadian version of the application.
- Tested with GHUnit on top of SenTest/OCUnit. Ran the tests as part of a Continuous Integration process, using Hudson.

VacationView Inc. – Principal Software Engineer

11/2009 - 11/2010

- Helped craft a timeshare trading system for vacationtrade.com, complete with geocoded resorts, interactive maps, and a web interface fueled with Ajax.
- Tools used include Ruby, Rails, jQuery, Google Maps, Bing Virtual Earth, Heroku, Haml, Cucumber, RSpec, Vim, PostgreSQL & MySQL, Git & GitHub, Amazon S3, Pivotal Tracker, and Campfire.
- Established the use of Hudson for Continuous Integration, running our RSpec and Cucumber tests.
- Proudly contributed to this small company that won the 2010 international TWiST (This Week in Startups) competition for best new startup.

Nationwide

02/1997 - 11/2009

Corporate Internet Solutions - Consultant, IT Application Development

- Served as Tech Lead for the Nationwide Mobile iPhone app, which was featured in the App Store.
- Designed and implemented back-end services to deliver data in JSON format to the iPhone app and to accept multi-part MIME posts from the app.
- Leveraged Instruments and LLVM Clang to find and resolve performance issues.
- iPhone app technologies included local SQLite storage using FMDB, a combination Navigation/Tab Bar controller structure, some Core Animation, and integration with the camera, contacts, JSON services & server-side authentication.
- Guided web front-end development for Nationwide's main site, assisted with campaign and subsites, redesigns, prototypes, and user testing. Technologies involved included CSS, JavaScript, XHTML, enterprise CMS, MapQuest, and other 3rd party JavaScript APIs.
- Architected a successful multi-year redesign and Java EE migration of a web application for investment professionals. This brought the site's Dalbar ranking up from 22 to 8.
- Designed J2EE-based frameworks as part of an architecture team. Areas of focus included a Strutsbased presentation layer, menu framework, and JAAS-based authentication & authorization framework with a custom DSL for business rules.
- Performed production support for all external Nationwide Financial sites, contributing to years of >99% uptime.
- Promoted essential subjects, such as progressive enhancement, accessibility (A11y), web standards (W3C, WAI, WCAG, 508), and search engine optimization (SEO). Helped define user interface (UI) standards, including coverage of cross-browser testing and other web development practices.

• Evangelized and mentored others on topics including Java programming, Test-Driven Development (TDD), Continuous Integration (CI), agile methodology (Extreme Programming / XP), and pair programming. Led the development of coding standards and a code review process, implemented a wiki for shared documentation, and established unit and acceptance testing as a regular discipline.

Freelance Web Programmer - Various Clients

1998 - 2011

- Implemented designs with clean, valid, and accessible (X)HTML, CSS & JavaScript.
- Updated sites built with PHP (Drupal and Zend).
- Designed and coded solutions in Adobe (Macromedia) Flash.

Languages & Tools

- iOS Tools: Cocoa Touch, XCTest, XCUITest, KIF, GHUnit, OCUnit, Kiwi, UIAutomation, Xcode, Interface Builder, Instruments, Core Data, Fastlane, Swift Package Manager (SPM), CocoaPods, Carthage
- Flutter: BLoC, Riverpod, Provider, Dio, GoRouter, Firebase, GraphQL, build_runner, Stream, SyncFusion
- JavaScript: TypeScript, React, NestJS, Next.js, jQuery, Jest, Jasmine, Ajax
- Ruby: Ruby on Rails, minitest, RSpec, Cucumber, Heroku, Phusion Passenger
- Golang: Nats.io, Geth, Corbra
- Java / JVM: Java SE, Java EE (J2EE), JUnit, Struts, JSP, JSTL, AspectJ, Swing
- Other Testing: Cypress, Selenium, Appium
- API: REST, GraphQL, JSON:API, HAL (Hypertext Application Language), SOAP, SAML, XML-RPC, CORBA
- Editors & IDEs: Visual Studio Code (vscode), Vim, Eclipse, IntelliJ
- Version Control / SCM: Git / GitHub, Subversion, CVS, ClearCase, CA Harvest
- Application Server: Tomcat, WebSphere, Netscape Application Server / iPlanet
- Database: SQL, PL/SQL, SQLite, Oracle, PostgreSQL
- **Process & Documentation:** Agile, eXtreme Programming, Shape Up, UML, Static Analysis, Accessibility (a11y), Localization & Internationalization (L10n, i18n).
- Continuous Integration: GitHub Actions, CircleCl, Travis Cl, Jenkins, TeamCity
- Other Web Tech: HTML / XHTML / HTML5, CSS, SVG, Flash
- Structured Markup: XML, XSLT, XSL:FO
- Microsoft: Visual Basic, Access
- PHP: Drupal, Zend
- Mainframe: COBOL, JCL, TSO, ISPF, VSAM, PROFS
- Other Languages: ActionScript, Lingo, Lua, dBase, Tcl, Bash
- Other Programming Interests: Rust, Elixir & Phoenix, Kotlin, Python, Vue.js, and much more.

Education

Bachelor of Arts, The Ohio State University, 1995 Major: Philosophy & Minor: History

Community Involvement

- Speaker at CodeMash (January 2013 and January 2014)
- Speaker at CocoaConf Columbus (August 2012)
- Speaker at M3 Conference (October 2012)
- Frequent speaker at other user groups, especially BuckeyeCocoa (the central Ohio CocoaHeads chapter) and the Columbus Ruby Brigade
- Frequent participant at other conferences and user groups
- Technical reviewer for Packt Publishing's *Reactive Swift 4 Programming* (covering RFP with RxSwift) and *iOS 12 Programming for Beginners*
- Book reviewer for Manning Press' Objective-C Fundamentals and JavaFX in Action
- Book reviewer for independent author Josh Brown's Unit Testing in Swift
- Reviewer for Pragmatic Programmers, including the books *Test iOS Apps with UlAutomation, Build iOS Games with Sprite Kit, The VimL Primer* and *Developing for Apple Watch, 2nd Ed*, as well as the *Sublime Text 2* videos