

Professional Development Experience

WeightWatchers (New York, NY) Software Engineer *July 2019–Present*

Contributing to the Accounts team as an iOS developer. Accounts is responsible for account creation, cancelation and deletion, as well as in-app subscriptions.

- Serving as the in-house expert on concurrency bugs for the iOS group at WeightWatchers. I have given several presentations to the iOS group on safe use of various concurrency primitives and abstractions, from POSIX locks through global actors. I also provide emergency support and fixes for other teams' Swift Concurrency bugs.
- Managed the development of emergency fixes for critical bugs affecting international in-app subscriptions. These bugs moved from discovery to triage, reproduction, fix, review, and App Store submission in less than a day. In addition to overseeing delivery soup to nuts, I contributed to the triage, reproduction, fix, and review steps directly.
- Developed a novel technique, Two-Step Codable, for conforming to the Codable protocol using intermediate types. The technique simplifies encoding and decoding complex values from data transfer formats like JSON, improving testability and maintainability. It also provides a straightforward way to incorporate validity and consistency checks into the decoding pipeline.

Led iOS development of the Content Hub feature of the customer-facing WW iOS app, which presents a dynamic list of articles, videos, and audio content that can be customized per-user.

- Created a majority of the Content Hub section of the WW Mobile app. Content Hub uses several of my favorite techniques for straightforward and maintainable iOS code. Network calls are composed of generic functions, where all the work is done through function composition in a services layer. Complex UI behaviors are created by sequencing simple child view controllers. I even added an `@OmitsBadElements` property wrapper for decodable arrays to gracefully remove malformed content returned from the backend while logging actionable debug information.

Contributed as an iOS developer to the Studio app, a native iPad app for WW employees and contractors to manage the in-person customer experience at WW locations.

- Built substantially all of Tally, which aggregates data from several sources to create per-meeting reports of factors driving coach compensation. Tally uses child view controllers to encapsulate complex functionality and separate concerns. The header of the Tally report is designed to collapse when scrolled and uses four synchronized scrubbable property animators to smoothly scale and hide elements to achieve the desired look.
- Used a "lead by example" approach to increase the quantity and quality of documentation in the Studio app.

Citi FinTech (Long Island City, NY) on contract from LTI *May 2018–July 2019*

Worked primarily as an iOS developer on the Insights team of Citi FinTech. My roles included writing Swift for the Citibank iOS app, maintaining a Java endpoint, reviewing pull requests for other teams, and mentoring new iOS developers.

- Pinch-hit as a microservices developer to help our backend team. Fixed bugs and added features and unit tests and.
- Created a new abstraction for iOS network calls in the Insights features, making heavy use of generics. Improved test coverage and code reuse while eliminating hundreds of lines of confusing and duplicative code. My networking abstraction was ultimately used by three other teams.

Other Development Experience

TimerSwipe (alank.github.io/timerswipe) Independent Developer *January 2016–June 2018*

Designed and developed TimerSwipe, published in the App Store in January 2017: appstore.com/timerswipe

Other Work Experience

American Thoracic Society (New York, NY) Coordinator *April 2014–February 2017*

Global Advisors on Smokefree Policy (Summit, NJ) Program Manager *2011–2014* **Consultant** *2010–2011*

Skills & Education

Swift, Cocoa Touch, UIKit, SwiftUI, Git, Jira, Rational Team Concert, interdisciplinary communication, and facilitation.

B.A., Drew University (Madison, NJ) *May 2010*

Philosophy major, Economics minor. 3.8 GPA. Summa Cum Laude.