

# Itai Ferber

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2019– **YNAB**

*Senior Mobile Engineer — iOS (Objective-C, Swift)*

Implementing customer-facing features in the shipping iOS mobile app.

2016–2019 **APPLE**

*Software Engineer — Foundation Framework (C, C++, Objective-C, Swift)*

Designed and maintained developer-facing APIs on the Foundation framework:

- Designed and implemented new framework-level Swift API for archival and serialization (Codable); contributed code synthesis implementation to the Swift compiler (C++) to ease developer adoption; owned framework-side encoders (JSONEncoder, PropertyListEncoder)
- Owned Foundation and CoreFoundation string implementations (NSString, CFStringRef) and maintained Unicode spec compliance with updates in Unicode 11 and 12 (e.g. handling extended grapheme cluster definitions)
- Owned locale-based APIs for translations and formatting (NSLocale, NSNumberFormatter and related subclasses), calendrical calculations (NSCalendar), and time zone support (NSTimeZone)
- Owned archival and serialization APIs (NSKeyedArchiver, NSJSONSerialization) and helped lead push for increased internal adoption NSSecureCoding
- Focused on backwards- & binary-compatibility, interfacing directly with clients (internal & external)

## WWDC

Presented new APIs and technical concepts to developers as the public face of Apple

- 2018 • *Data You Can Trust*: security-focused talk about preventing implicit trust of malicious data in archives
- 2017 • *What's New in Foundation*: demo of Codable API and compiler support

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## — SKILLS —

**TECHNOLOGIES:** Expert-level experience with macOS, iOS, Xcode, Unix/Linux systems,  $\LaTeX$ , CLI/shell scripting, version control (particularly Git), unit testing (XCTest and custom harnesses), debugging (LLDB/GDB, disassembly)

**COMPUTER LANGUAGES:** Fluent in Objective-C, Swift, C, C++. Significant experience with Ruby, Python, Java, JavaScript, HTML, and CSS. Experience with Haskell and Rust

**HUMAN LANGUAGES:** Native fluency in English and Hebrew; strong technical writing skills

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— INTERNSHIP EXPERIENCE —

2015 **APPLE**

*Software Engineering Intern — Foundation Framework (C, Objective-C)*

- Developed internal API for improving performance of common IPC messaging by 15%
- Designed object serialization format requiring minimal fix-up on receiving end for nearly-free decode cost

2014 **APPLE**

*Software Engineering Intern — Foundation Framework (C, Objective-C, Swift)*

- Designed and implemented API addition to Apple's core Foundation framework and completed engineering review
- Presented API to upper management for feedback and performed in-depth technical review

2013 **BRAINPOP**

*Software Development Intern — BrainPOP ESL (Objective-C, iOS, UIKit)*

- Prototyped two BrainPOP ESL games for iOS (new target platform)
- Wrote a custom UIKit-based game controller framework supporting iOS 4–6
- Wrote a custom asset management system for dynamically-loading game content from the web for platform-independent games

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— EDUCATION —

2012–2016 **SUNY BINGHAMTON**

B.S. in Computer Science, *summa cum laude*, 3.88/4.00 GPA