

# John Hearn

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## PROFILE

*Experienced software engineer, occasional product manager, and mathematician (with brief stints in fashion design and commercial fishing). Ever a generalist. Currently leveraging varied expertise to direct interdisciplinary teams building software tools for acoustic engineers. I like working with smart people to solve hard problems. I also like race cars.*

## RECENT WORK EXPERIENCE

### Principal Software Engineer, Acoustic Tools APPLE

2022-PRESENT | CUPERTINO, CA

### Senior Software Engineer, Acoustic Tools APPLE

2018-2022 | CUPERTINO, CA

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### iOS Engineer TOMORROW

2017-2018 | SEATTLE, WA

- Developed, from infancy to maturity, award-winning financial planning app.
- Conceptualized with VP of Product the design of custom UI to collect and present detailed financial information in a way that was easy for users to understand.
- Onboarded and trained new engineers in use of ReSwift and ReactiveSwift to manage app state and asynchronous data flow.
- Performed daily code reviews to improve team coding standards and app performance.
- Researched and implemented numerous libraries and frameworks for use in app to quickly reach minimum viable product.
- Developed a traffic control algorithm to delay UI updates until complete, interdependent data sets had been returned by the API.
- Developed and maintained client-side business logic to determine when users had completed legally necessary tasks to generate legal documents, and to guide them through unfinished tasks.
- Coded test suite to validate data models and business logic with Quick and Nimble.
- Wrote and maintained internal documentation for build pipeline tools, including Carthage, Cocoapods, ReSwift, custom build scripts, BuddyBuild (for continuous integration testing and test build deployment), and iTunesConnect.
- Migrated project dependency management from Cocoapods to Carthage to improve Swift build times.

## SKILLS

### Languages

Proficient: Swift

A Bit Rusty: Objective-C, Java, JavaScript, C/C++, PERL, BASH, MySQL, MongoDB, Ruby, L<sup>A</sup>T<sub>E</sub>X

Familiar: Python, FORTRAN, x86 Assembly, MatLab, eLISP, PROLOG

### Professional

- Strong attention to detail
- High ethical standards
- User experience focused
- Promotes collaboration and inclusion
- Communicates technical concepts with simple language
- Recognizes and prevents problems early
- Creative and resourceful in chaotic environments
- Always playing the long game

### Tools & Frameworks

Xcode, ReactiveSwift, ReactiveCocoa, RxSwift, ReSwift, Moya, ObjectMapper, AlamoFire, Nimble/Quick, XCTest, UIKit, CoreData, CloudKit, SpriteKit, MapKit, CoreLocation, Git, BuddyBuild, ParseServer, Carthage, Cocoapods, Node, React, Redux, Express, AWS, Heroku, GoogleAnalytics, Fabric, Flurry, LLDB, WebPack, Browserfy, Chai, Gulp, JQuery, Subversion, TravisCI, Rails, Selenium, Bugzilla, SocketIO

## AWARDS

### Plug and Play Summit

WINTER 2017 | WINNER

### Tech Crunch Disrupt

2017 | NOMINEE

## OTHER PROJECTS & EXPERIENCE

### iPhone App WIKABLE

2017 | SEATTLE, WA

- Developed a hackathon proof of concept Wikipedia client in Objective-C using VoiceOver and DynamicText to make content accessible to people with visual impairment.

### iPhone App ROUTEStats 1

2016 | SEATTLE, WA

- Developed a small app over 4 days to display realtime and aggregate travel statistics using Swift, MapKit, CoreLocation, and CloudKit.

### Web Game Platform PUSHES ROCKS

2016 | PORTLAND, OR

- Developed a web platform for mini-games with NodeJS, Express, and OpenShift.

### Backend Web Development JOHN HEARN CONSULTING

2007 - 2016 | PORTLAND, OR AND SEATTLE, WA

- Worked with many clients to develop, test, and maintain their backend APIs using Rails, MEAN, or LAMP stacks and associated technologies.

### Kickstarter Campaign papparel

2013 - 2014 | PORTLAND, OR

- Developed a Portland-centric clothing brand sourcing locally made materials and designs.

### Test Automation CARBON SALON

2008 - 2010 | EUGENE, OR

- Implemented and maintained automated unit and integration test suites for Rails apps with Selenium and related tools.

### Engine Development GARAGEGAMES

2007 | EUGENE, OR

- Implemented fixed-function and clip map rendering, Mac platform port of game engine, and legacy code test suite.

### Employee Application Portal HARVEY MUDD COLLEGE

2006 - 2007 | CLAREMONT, CA

- Developed PERL scripts for automated processing of online job applications, including an HTML tokenizer, automation of database tasks, and rendered HTML email forms.
- Assisted students and faculty with computer-related difficulties.

### Bugzilla/CVS Integration PARASOFT

2006 | MONROVIA, CA

- Implemented automated scripts and Bugzilla-integrated webform to associate specific CVS revisions of multi-file patches with Bugzilla tickets based on nightly tests.

## EDUCATION

### Harvey Mudd College

BS IN MATHEMATICS

Spring 2007 | Claremont, CA

### University of Waterloo

Summer 2005 | Waterloo, ON

Courses taken in support of thesis

### Big Nerd Ranch

Spring 2013 | Banning Mills, GA

iOS Essentials with Objective-C

### Code Fellows

Spring 2015 | Portland, OR

Advanced Full-Stack Development with JavaScript

Winter 2016 | Seattle, WA

Advanced iOS Development in Swift & Objective-C

## COURSEWORK

Kolmogorov Complexity

Theory of Complexity

Graph Theory

Analytic Number Theory

Theory of Computation

Algorithms

Data Structures

Combinatorics

Number Theory

Real Analysis I & II

Abstract Algebra I & II

## RESEARCH

### Kolmogorov Complexity

HARVEY MUDD COLLEGE

2005 - 2006 | CLAREMONT, CA

Worked with [Prof. Ran Libeskind-Hadas](#) to explore applications of [Kolmogorov complexity](#) to graph compression.

### Harvey Mudd Humanities

RESEARCH ASSISTANT

2005 | CLAREMONT, CA

Assisted [Prof. Richard Olson](#) in researching sources relating to discovery and use of algebra in China during the ancient and early imperial epochs.