John Hearn

keeps everyone rowing in the right direction
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PROFILE

Experienced software engineer, occasional product manager, generalist, and mathematician. Currently leveraging varied expertise to direct interdisciplinary teams building software tools for acoustic engineers. I like working with smart people to solve hard problems.

RECENT WORK EXPERIENCE

Staff Software Engineer APPLE
2022-PRESENT | CUPERTINO, CA

Senior Software Engineer
2018-2022 | CUPERTINO, CA

- Technical Lead and Hiring Manager for the Acoustic Tools Team
- Developed team values and methodologies to deliver high-impact software tools on an aggressive schedule
- Responsible for scoping roles, writing job descriptions, recruiting, hiring, and onboarding of new team members
- Managed project intake and customer onboarding: requirements gathering, impact assessment and prioritization, customer contracts, developer assignment, delivery, and maintenance
- Provided technical direction for over 40 internal software projects, including Mac and iOS apps, single page web apps, and various flavors of data acquisition and test automation
- Product manager: **Auditor** and **Labrador** factory test data analysis and reporting tools
  - Developed externally by a team of 20 with the project manager reporting to me
  - Directed migration from a failing monolithic architecture to distributed, redundant microservices
  - 80% reduction of bugs found in production through adoption of TDD, Kanban, CI/CD, and technical debt heat maps
  - 20x or better speed improvement for 12 worst performance bottlenecks

iOS Engineer TOMORROW IDEAS (ACQUIRED BY ETHOS IN 2022)
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.
- 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.
- Implemented unit test suite to validate data models and business logic.
- 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.

SKILLS

Professional
Strong attention to detail
Clear communication
High ethical standards
User-focused design
Collaboration & Inclusion
Prevention over cure
Upward mangement
Always play the long game

Languages
Swift
Objective-C
JavaScript
Python
Java
MatLab
C/C++
PERL
BASH
Ruby
LaTeX

Tools & Frameworks
Xcode, AppKit, UIKit, XCTest, CoreData, Git, FRP, React, Redux, PostgreSQL, MongoDB, AWS, Kubernetes, Jenkins, Ansible, Cypress, Photoshop, Sketch, Keynote, TeXShop

AWARDS

Plug and Play Summit
WINTER 2017 | WINNER

JPMorgan Chase FinLab
2017 | APP OF THE YEAR

TechCrunch Disrupt
2017 | NOMINEE

INTERESTS
Astrophotography
Wildlife Photography
SCCA Auto Racing
Scuba Diving
International Travel
Wine Tasting & Education

Selected Projects & Experience

iPhone App   ReactiveStocks
2017 | Seattle, WA
Developed a small app that fetches realtime stock prices as a demonstration of functional reactive programming and dependency injection in Swift with network testing using Quick and Nimble frameworks.

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 and native APIs.

Web Game Platform   Pushes Rocks
2016 | Portland, OR
Developed a web platform for mini-games with NodeJS, Express, SocketIO, and OpenShift.

Backend Web Development   John Hearn Consulting
2007 - 2016 | Portland, OR and Seattle, WA
Worked with many clients to develop, test, and maintain backend APIs using Rails, MEAN, or LAMP stacks.

Kickstarter Campaign   ɓapparel
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 clip map rendering, bug fixes for MacOS 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.

Bugzilla Integration   Parasoft
2006 | Monrovia, CA
Implemented automated scripts and Bugzilla-integrated webform to associate CVS revisions of fixes with corresponding Bugzilla tickets.

Education

Harvey Mudd College
BS in Mathematics
Spring 2007 | Claremont, CA

University of Waterloo
Summer 2005 | Waterloo, ON
Courses taken in support of thesis research

Big Nerd Ranch
Spring 2013 | Banning Mills, GA
iOS Essentials with Objective-C

Code Fellows
Spring 2015 | Portland, OR
Full-Stack Development with JavaScript
Winter 2016 | Seattle, WA
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
Vector Calculus
Discrete Mathematics
Systems Engineering
Engineering Design & Manufacturing
Linear & Rotational Mechanics
Special Relativity & Wave Motion
Electricity & Magnetism

Research

Kolmogorov Complexity
Harvey Mudd Mathematics
2005 - 2006 | Claremont, CA
Explored with Prof. Ran Libeskind-Hadas applications of Kolmogorov complexity in graph compression

Research Assistant
Harvey Mudd Humanities
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