

Jason Pepas

<https://jason.pepas.com> | 512-743-0617 | jason@pepas.com

Ten years native iOS experience, with a side of backend and mentoring.

Principal iOS, ibble, Inc. (2/2021 - Present)

- Dramatically decreased video playback UX lag by porting select React Native components to **Swift native components**.
- Optimized time-to-first-frame of video playback by implementing HLS prefetching for AVPlayer using an on-phone **HLS proxy server**.
- Implemented a two-way communication **bridge** to keep React Native and Swift state in sync.
- Used **code generation** to keep Typescript and Swift type definitions in sync.
- Captured and automated tribal development process knowledge in the form of dozens of **scripts**.
- Added **slack** integration to our automated build scripts.
- Assisted with development of **React Native** features.
- Led a **Swift guild** to mentor teammates on how to develop using Swift.

Year of Sabbatical, (10/2019 - 1/2021)

- Shipped an iPhone / iPad app: **GridNotes**, a piano with a grid-based layout. See github.com/pepaslabs/GridNotes.
- *Programming projects*: **Lisp interpreter** (C), hash table (C), **assembler** for LC-3 (Python), **transpiler** for an alternative C syntax (Python), lexer generator (Python), parser generator (*incomplete*, Python), Sudoku solver (C, Python), snake game (C/SDL), LZO bindings for the Janet language. See *dev blog* at jason.pepas.com.
- *Electronics projects*: A/B/X testing audio switchboard, audio DAC circuit board designs.
- Attended David Beazley's **Structure and Interpretation of Computer Programs** and **Compilers** courses.

iOS Tech Lead, FloSports, Inc. (1/2017 - 10/2019)

- Led the greenfield development of the FloSports iPhone and **tvOS** video streaming apps.
- Implemented an API-driven **widget** layout architecture for dynamic native content.
- Designed and implemented iOS-specific **API endpoints** (PHP).
- Partnered with the design team on a **design language**, with a debug menu to allow designers to tweak design elements without requiring a rebuild.
- Encouraged "**demo-driven development**" to maintain high developer velocity.
- Led a weekly **tech talk** screening / discussion group.
- Co-led a weekly programming **puzzles** guild.
- Led a robot build day **outreach** event for the Latinitas youth group.

Senior iOS Developer, Khan Academy (remote, 4/2016 - 1/2017)

- Improved low-bandwidth video experience by extending the API to serve **low bitrate** videos.
- Implemented **exponential backoff** to guard against unintentional DDOS of buggy API deploys.
- Enhanced **offline** UX by storing / resubmitting user progress points earned while offline.
- Reduced app bundle size by **14MB** by implementing remote icon fetching.
- Further **automated** the deploy process using Python and Bash scripting.
- Gained exposure to the **ReactiveCocoa** functional-reactive framework.

- Hackathon project: prototyped automatic Swift **code generation** based on API output structure.

Senior iOS Developer, uShip, Inc. (4/2013 - 4/2016)

- Reduced the **cost of iterations** from the design team by adopting a DataModel, StyleModel, and LayoutModel pattern.
- Migrated from Objective C to **Swift 1.2** through a strategy of attrition.
- Provided working **demo apps** to the design team to quickly iterate on design concepts.
- Assisted with the design of iOS-specific API **endpoints**.
- Dramatically reduced **build times** by splitting the app into frameworks.
- Implemented a **UI test automation** solution using Subliminal.

iOS Developer, Phunware, Inc. (10/2010 - 3/2013)

- Served as **Lead Developer** on four iOS projects (two iPad apps), assisted on many iPhone projects.
- Optimized rendering performance of the Perler iPad app via an asynchronous **rendering queue**.
- Scripted the process of adding targets to **templated** Xcode projects (largest had 45 targets).
- Implemented a server-side API caching layer to enhance the robustness and latency of customer API endpoints. The customer's monolithic 250KB XML feed was **scraped, parsed, and split** into screen-specific 8KB compressed binary plists, hosted via S3. This solution insulated the app's UX from the customer's API latency / instability while requiring no developer investment from the customer.
- Implemented a **push notification** service provider (*Python*).
- Implemented an app sales screen scraping and customer **report generation** system (*Python*).
- Implemented a continuous integration **build server** (*Python, Bash*).

EDUCATION:

- Bachelor of Science in Computer Sciences, University of Texas at Austin

OTHER HONORS:

- Eagle Scout (Troop 337 - Katy, TX)