

Objective: Tech lead or engineering manager

Summary:

I'm a Javascript / product specialist, with 8 years of experience delivering great web applications (Urbit, Twitch, Metromile). I'm well-versed in several product domains, including UX design, API implementation, and devops duties, but specialize in developing highly interactive web applications. My recent tool stack includes React/Redux for JS, Figma for design, and good old HTML/CSS for UI. No tool stack beats a healthy understanding of the fundamentals; HTML, HTTP, rigorous testing, thorough processes, code standardization, et cetera.

I'm deeply passionate about growing and mentoring teams of developers. I've had the opportunity to excel at formal management positions; I've worked with multiple executives to deliver solid OKRs and product roadmaps, and maintaining relationships and morale is a reflex for me. I still also love writing code, and I think the best leaders have some expertise in the team's technology stack and domain, so I'm never afraid to get my hands dirty with doing plain software development.

Experience:

- **Reflections** **Late 2020 - 2021**
 - Spent a couple of months writing drafts of a book on civics and macroeconomics. Philosophy and writing are important tools to help navigate trying times. Some incomplete chapters are featured here:
 - <http://cjohnson.io/civics>
 - <http://clutchofthedeathand.us/macro/debt>
 - Worked with some local non-profit leaders (Connecting for Good, <https://cfg.pcsforpeople.org/>) to put together a computer refurbishing and support service for those in need of digital access during the Covid crisis. Organized a warehouse of used computers, and set up processes for repair, sale, and distribution.
 - Ultimately, we were unable to find a sustainable profit center. But I greatly enjoyed the experience, and learned a lot about hardware support and the non-profit world.
- **Simplifly - Software Engineer** **Early 2020**
 - Worked as a line software engineer, implementing various features and bugfixes for Simplifly's multifamily investment product. Designed an architecture to transition from a patched-together Firebase prototype application into a longer-term GraphQL + postgres store. Worked on all layers of application (design, frontend, and backend), primarily using a lean React + serverless stack and integrating with a number of third-party services.
- **Tlon - Software Manager, Interface** **2017-2019**
 - I led the Interface department at Tlon, a decentralized computing startup backed by a16z. I managed four direct reports in a standard Scrum process, with emphasis on regular 1:1s and robust team feedback. Worked with the CEO to develop the product roadmap, improve the design/product process, and delivered successful OKRs for high-level directives.
 - I personally developed the flagship application, Landscape, on top of their revolutionary, decentralized computing system (Urbit), which is still in use today with several thousand users.
 - Built a design styleguide, coding standards, product/release process, and initial application from the ground up.

- Twitch - Lead Front-End Engineer** **2016-2017**
 - Lead the development process for a sweeping redesign of Twitch's highest-trafficked view, the channel page (eg, twitch.tv/lirik), which touches 5 million daily active users. Worked with a team of 8 people and saw the development process through front-to-finish.
 - Mentored a new intern, who delivered a spectacular feature (miniature video overlay) which significantly increased Twitch's core product metric (Minutes Watched)
 - Did some core architecture work in helping move Twitch from an Ember.js-based architecture to a React-based one, working with the Ember squad to adapt several teams and departments to the new framework.
 - As an engineer for the Web Player team, I was responsible for rendering the video UI element for all streams / videos (including ads, video controls, playback, etc.)
- Metromile - Senior Front-End Engineer** **2015**
 - As an engineer, I developed and maintained half a dozen applications (quote & enrollment application, admin tool, customer dashboard), interviewed and helped manage the front-end team, and coordinated with PMs, designers, marketing, the backend team, and accounting to design and manage various projects.
 - **Key accomplishment:** Leading development efforts for a full application redesign for the quote & enroll process, completed on schedule (~2 months)
- Gain Fitness, Inc. - Software Consultant** **Fall 2014**
 - Provided guidance for and helped implement Gain's web marketing presence from the ground up. Built several landing pages, in-depth user surveys, and worked with Gain's marketing team to implement a marketing campaign from scratch. In addition, I designed and implemented the core Angular services used for conversion and onboarding.
 - **See also:** <http://trainer.gainfitness.com>
 - **Technologies used:** Javascript (Angular), HTML, CSS, Rails
- LocBox, Inc.** **2013**
 - Position: Lead front-end engineer
 - Summary: As a startup of 12 employees, Locbox required me to fill many different roles with zero training or experience. While I spent most of my time as a front-end engineer, I wore several hats including product designer, project manager, backend engineer, and devops specialist.
 - Tasks:
 - Converted most of our application from a Rails, form-based application to an EmberJS-powered client-driven app
 - Re-wrote the marketing site (www.locbox.com) to be fully responsive and communicate our message more clearly
 - Re-wrote the internal analytics system using MongoDB to an event-based analytics system
 - Re-factored a large codebase of CSS, JS, and HTML into a robust, well-architected codebase
 - Inherited 2 years of front-end code written by contractors, past employees, and the CEO
 - Re-wrote all front-end code (html, css, and js) to serve landing pages for our marketing campaigns (Locbox's bread-and-butter)
 - Required substantial attention to performance, accessibility, and cross-browser compatibility (IE8)
 - Responsive across all major devices and browsers
 - Substantially contributed to product design and management
 - Originated several new features based off of feedback from sales, support, and executive departments
 - Spec'd, designed, iterated, managed, fought for, and implemented these features.
 - **See also:** <http://locbox.com/>
 - **Technologies used:** Javascript (Ember), Ruby on Rails, Sinatra, Node.js, HTML/CSS, SASS

- **\$100,000 TradeKing API Challenge** **Spring 2012**
 - Won the national \$50,000 prize for our three-part application that uses Tradeking's brokerage API.
 - Tasks:
 - The first part is a chrome extension that scans a web page for stock symbols. When it finds a stock symbol, it inserts a widget displaying the current stock price and an overlay with a stock graph, some financial information, and the ability to buy the stock right in the browser window.
 - The second part is a cloud-based notification service that alerts you whenever a stock drops in price, breaks a moving average, or some other event occurs. Notifications are received on the browser extension and on the mobile application.
 - The third part is an android application that displays notifications and lets the user set notifications on stock movements.
 - See also: <http://apicampuschallenge.com/>
 - Technologies used: Javascript, HTML, Java EE, Chrome APIs, JSONP, OAuth
- **Freelance Web Development**
 - I ran a small freelance web design and development business. I usually handle business and development tasks and work with professional graphic designers, although my design skills are improving. Some of my projects include:
 - Gain Fitness, Inc. **Fall 2014**
 - trainer.gainfitness.com
 - Magnolia Metal Inc. **Summer 2012**
 - www.magnoliabronze.com
 - World Energy Project **Winter 2011**
 - www.worldenergyproject.org
 - Premier Parking Services LLC **Summer 2010**
 - www.premier-parking.com
- **VMWare, Inc. – Software Development Intern** **Summer 2012**
 - I worked on a project called Scripted, a web-focused code editor that lives in the browser. I worked on the front-end, mostly writing client-side JavaScript, implementing components in HTML/CSS, and managing the navigation / flow of the application. I was involved in product design, development, and planning.
 - I conceived of and implemented significant components of the product, including the secondary code editor, help menu / keybinding editor, several navigation components, and the file history, as well as many others.
 - See also: <https://github.com/scripted-editor/scripted>
 - Technologies used: Javascript, HTML, CSS, node.js
- **Economics Department at UNL -- Software Consultant** **Spring 2011**
 - Built a software system that parses Current Population Survey (CPS) data and matches survey correspondents across years using demographic identifiers. CPS data is downloaded from a web service, unzipped, and then parsed together using several incomplete header files that are cross-referenced for veracity. Once the data has been read into the database, the software then constructs cohort tables of labor transition rates to analyze a person's overall expected employable lifespan based off of their statistical cohort transition rates.
 - Co-authored a research paper about our findings. Wrote the portion on how to obtain, sanitize, and process the data we used, and outlined our procedure for boosting the accuracy of matches using demographic identifiers and other statistical methods.
 - See also: <https://github.com/c-johnson/CPSMatcher>
 - Technologies used: Java, MySQL
- **Don't Panic Labs, Inc. – Software Development Intern** **Summer 2011**

- o Wrote a computer vision application that takes video feed from parking lots and determines if spots are empty or occupied. Used naïve Bayesian classifiers, k-nn classifiers, and boosting algorithms.
- o Designed mobile and web clients to route users to parking lots with open spots in the area. Guided the user to available parking near a particular location, venue, or event.
- o Attempted to develop a sustainable business model with this software. Decided to not pursue the project.
- o **See also:** <http://blog.dontpaniclabs.com/post/2011/07/21/Kill-Your-Darlings.aspx>
- o **Technologies used:** C++, OpenCV, C#, ASP.NET, HTML / Javascript

• **State Studios – Project “Marketboard” – Founder, Project Manager, Developer** **Autumn 2012**

- o Conceived an idea for a product called Marketboard; a CRM and reporting tool with specialized functionality for investment advisors, including the ability to trade stocks through multiple online brokerage APIs and monitor a portfolio's performance.
- o As project manager, I led a team of 4 skilled software developers (+1 marketing guru) through business model generation and product development
 - Applied a “mostly” scrum process, involving daily standups, user story / task metaphors for issue tracking, and iterative 1-2 week sprints with continuous feedback.
 - Guided market research efforts and translated results to actionable backlog items. Activities include researching competitors, analyzing market segments (based off of features, pricing, market position, customer book size, and investment vehicle type), and summarizing these results for presentations
- o I was also the lead developer / architect, working on components from the front-end to the back-end.
 - Managed several aspects of the backend / development environment, including the build process, testing, and deployment automation, as well as security, authentication, and database migrations.
 - Architected a custom dependency injection / inversion of control container to distribute our various services concurrently.
 - Wrote a templating engine that inserts custom data fields into a Microsoft Word document, then exports to a PDF.

Technologies used: C#, ASP.NET, HTML, CSS, Javascript, Java EE, MongoDB, SQL Server

• **Design Studio – Nelnet – Lead Developer** **Autumn 2011 / Spring 2012**

- o Developed a web application that allows users to log activities, like exercising or eating healthy foods, which count toward company-offered “challenges”. Users gain points from completing challenges which can be redeemed for money in a company's health insurance deductible pool.
- o I was a lead developer, working on components on both the front-end and the back-end.
 - I developed much of the database architecture, which used WCF and Entity Framework
 - I architected several major components of the system, including the “challenge” component, the login / support system, and the activity / challenge matching algorithm.
 - I designed and implemented many client-side components and pages, which includes the design, HTML/CSS, AJAX interaction, MVC controller, and the interfaces to the data layer.
 - I was in charge of the front-end page lifecycle, including load optimization, caching, and navigation
 - I managed the build cycle, testing, and deployment workflow.
- o **Technologies used:** C#, ASP.NET, HTML, CSS, Javascript, responsive layouts

• **Nanonation, Inc. – Software Development Intern** **Summer 2010**

- o Delivered an application that aggregates diagnostic information (hardware specs, device status and available services) about client machines on a network, and determines an overall “health” score for each machine. Developed a Silverlight GUI which displays this information in a consumable manner with color-codes for each machine, as well as a notification client for detecting “unhealthy” machines.

- o Technologies used: C#, Silverlight, WMI

Activities:

- **President, Association for Computing Machinery (ACM-UNL)** 2009-2011
 - o As president, I organized Nebraska Code Camp, a software development conference focusing on new development technologies and practices
 - www.nebraskacodecamp.com
- **World Energy Project, IT Manager** 2010-2012
 - o Ran website and IT infrastructure for the World Energy Project, a nonprofit that sends engineers to communities in Africa to install clean energy systems
 - www.worldenergyproject.org

Education:

- **Attended University of Nebraska-Lincoln, 3 1/2 years.** GPA: 3.307 2009-2012

Programming Skills (in order of familiarity):

- **Languages:** Javascript, Ruby, Golang, Java
- **Databases:** MySQL, MongoDB, SQL Server
- **Web Frameworks:** Ruby on Rails, node.js, Golang, ASP.NET, Java EE
 - o **Example patterns/tasks in each framework I'm familiar with**
 - MVC / MVVM –style architectures
 - Server-side and client-side templating, including forms, layouts, and partial views
 - REST-style web services
 - ORMs, lazy loading, and general application-to-database performance
 - Authentication / session management
 - Basic security principles (OWASP top 10)
 - HTTP architecture and routing
 - Build / deploy script automation
- **Front-end:**
 - o **HTML**
 - Most of the HTML5 spec, including canvas, WebSockets, audio/video, semantic markup
 - Templating in a variety of languages, including jsrender, and most server-sides
 - Lots of experience writing semantic, responsive markup.
 - o **CSS**
 - Much of the CSS3 spec, including new selectors, transforms, font-face, rgba, CSS3 gradients
 - Lots of experience with responsive / adaptive styling
 - CSS preprocessors such as SASS + compass
 - o **Javascript**
 - Extensive vanilla javascript knowledge, including closures, “this” / contexts, prototypes, etc.
 - Lots of production experience with managed frameworks like Ember and Angular.