Derek Barnes

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Summary

I am a software developer with 9 years of professional experience. Throughout my career, I've found myself working on every aspect of the development process, from ideation and development to maintenance and data analysis.

I am particularly interested in API design, automated testing, and practical applications of functional programming concepts in imperative, object-oriented languages.

Freelance

Software Engineer / Current

- Worked with **DentalDate** on their online dentist appointment system. I revamped their Braintree payment integration and built automated recurring billing features. I also lead efforts to improve the development process, including fixing the application's failing test suite, documenting its setup, implementing continuous integration and delivery, and formulating a code review process based on Github flow. I also upgraded the application's framework to Rails 5.

- Designed and prototyped a mobile toolkit application for healthcare providers with Upstream USA using React Native. Beyond building the application, I guided Upstream's leadership team in drawing up the technical specifications as well as devising a user testing plan.

Shyp

Software Engineer / 2016-2017

- Contributed to several profitability initiatives at Shyp, including the development of more reliable routing and route instrumentation systems, as well as a scheduling system to complement the on-demand platform.

- Lead efforts to modernize many aspects of our infrastructure, including moving several API services to Convox, as well as migrating text-based ids to native UUIDs. I wrote a blog post about the latter.

- Experimented with novel approaches to problems, including using image-recognition technology to estimate shipping pricing, as well as prototyping a push-based event bus to replace instances of application polling.

Merus

Engineering Consultant / 2015

- Lead design and development of **Merus**'s public API, written with Node.js against a legacy MySQL database. Delivered a first version to external clients within three months, opening a new revenue stream with the company's partners in the legal space. Also contributed patches to upstream `sequelize` and `node-mysql` libraries.

- Built an exploratory profile service **Merus.me** for attorneys, serving as a marketing engine, while also doubling as a test bed for developing the next version of the MerusCase front-end. The application is a universal React application with an Express backend.

Cadre

Founder / CTO 2014-2015

- Developed **Cadre**, an iOS application for connecting people to jobs through their existing social networks. Generated interest early on at companies like Match and Heroku, and interviewed with Y Combinator.
- Built several other prototype applications in the hiring space, including one based on an auction model, one focused on freelancers, and another centered around modern "makers".

OkCupid Labs / Match.com

Engineer at Large 2013-2014

Served as an internal consultant on various projects in the Match organization including:

- Separating SpeedDate.com's new Ember.js front-end from its legacy PHP backend, and helping devise a migration from its legacy backend to the API that powers Match.com.
- Designing and building a lead generation system responsible for handling large campaigns across Match, SpeedDate, OkCupid and other portfolio brands. The system incorporated a simple JavaScript API and client enabling junior front-end developers to test and launch various campaigns easily.
- Experimenting with using Natural Language Processing to cluster Match.com users into interest-based groups using Mahout.

Senior Software Engineer 2011-2013

- Organized engineering efforts for **Delightful.com**, a concierge service providing couples with tailored dates. The site was primarily a content management and inventory customization system built on Ruby on Rails and powered by Stripe.
- Spearheaded development of **Essentially.im**, to launch a mutual-selection dating application to iTunes in three weeks, despite none of the engineers (including myself) having never touched the iOS SDK. The Sinatra backend utilized Postgres's `LISTEN/NOTIFY`, a Celluloid-based message router, and Rack's hijack API for real-time chat.
- Lent expertise in building JavaScript single page apps in order to ship the initial iterations of **Crashpad**, a roommate finding application.

Led an internal tools and services team to design and build:

- An auth service handling **Kiss.com**'s 12M legacy logins and thousands of daily users. Prioritized the developer UX of the service, by allowing it to be easily mounted in and run against the host application's test suite.
- Social data parsing and warehousing services that would provide photographic information for **Ravel** and a taxonomic groundwork for **Opal.io.**
- An open source Redis-backed tagging library named Dank used by **Ravel** and **Twohodo**.

Fuery Solutions

Software Engineer 2008-2011

- Helped bootstrap a profitable web-based case-management system, **MerusCase**, utilizing a thick-client JavaScript application, a PHP API, and several Ruby microservices.

- Provided contract services for a number of businesses, including an adventure travel e-commerce site, a location based event-recommendation widget, and a web-based music video editor.

Education

University of California, Berkeley

BA Economics and Japanese, May 2008

Keywords

AWS, Git, Heroku, iOS, JavaScript, MySQL, Node.js, PHP, PostgreSQL, Rails, React, Ruby, Sinatra