Joseph Fraley: Software Engineer & Philosopher

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Professional Experience

Technical Career Highlights

- Contributed to the architecture and construction of a many-model machine learning development platform at Nike, one of the first of its kind across the industry.
- Massively improved signal-to-noise ratio of frontend error-reports at BetterUp, resulting in huge confidence and productivity gains.
- Captured millions of dollars in lost revenue by implementing a feature-access system at HP. Before this, it was impossible to restrict customer access to products that they had ever accessed before.
- Started, constructed, and maintained several frontend component libraries, in different tech stacks and at different organizations. I have strong intuitions about abstraction, costs, and productivity gains.
- An early adopter of GraphQL and Elm in the Portland engineering community.

Senior Software Engineer | BetterUp (January 2018 - Present)

- Frontend architecture for a legacy Rails/Ember application.
- Built metrics dashboard feature for displaying complex data over time to users without any data visualization framework.
- Improved frontend error reporting from total white-noise to purely actionable signals. Hundreds of meaningless on-call reports per day became only several per week.
- Led work on constructing a frontend component library. Led education and advocacy efforts for modern architectural patterns.
- Launched critical personalized recommendation features in collaboration with Machine Learning engineers and data scientists.
- Helped define the engineering culture by driving documentation, defining expectations, and exemplifying collaborative team work.

Senior Software Engineer | Nike (January 2017 - December 2018)

- Implemented architectural platform for testing and deploying multiple versions of machine learning models.
- Backend infrastructure and service architecture for Nike's machine learning and recommendations platform. We use a lot of Scala and Python. Our services are architected to be cloud-first, and deployed to Kubernetes on AWS.
- Implemented A/B testing of machine learning models served to end-users using Optimizely.
- Implemented service contracts that enabled integration of the recommendation services with nike.com,

peaking at 6,000 request per second.

- Drove product level discussions about our ethical obligations to consumers in machine learning systems.

Software Engineer | [Aruba Meridian](#) (October 2016 - December 2017)

- A front-end single-page app for bluetooth beacons management and a CMS for native location apps.
- Implemented feature-flags and account expiration enforcement that captured at least $800,000 in outstanding payments.
- Expanded and maintained micro-services on `Google App Engine`. For example, a `Python` `REST` API, `Node` location/routing service, front-end server, and more.
- Implemented token-based authentication for secure API access.
- Incrementally migrated a legacy `Django` monolith to a separate `React`/`Redux` front-end with a `GraphQL` interface.
- Implemented visual regression testing and screenshot diffing for front end projects. This was profoundly impactful on team productivity and confidence.

Software Engineer | [Idealist.org](#) (February 2016 - August 2016)

- Rebuilt platform from a a `Python` backend and a `Backbone`, `vanilla JS`, `jQuery` site to a single-page web application using `React` and `Node`, with server-side rendering and other modern features.
- Improved page load times by 5 seconds through major retooling of legacy build-process. From custom `Makefile`s, `bash` scripts and `Browserify` to `Webpack`.
- Fixed bugs and built new pages and features for a fully responsive, highly optimized web site.
- Collaborated in small teams and across teams using Agile methods and Kanban workflow.
- Extensive pair-programming and code review.
- Practiced TDD using test libraries like `Mocha` and `Jest`.
- Practiced `continuous integration` using tools in the Atlassian suite like Bamboo.

JavaScript Developer | [Team Treehouse](#) (November 2015 - April 2016)

- Built and deployed Treehouse courses including code challenges and project materials, unit tests, scripts, assessment tools, and curriculum outlines.
- Collaborated with designers, other instructors, and product managers to decide learning goals for students.
- Current courses include [JavaScript Unit Testing](#) - practicing TDD using `Mocha` and `Chai` by writing a game engine written in `Node`.

Lead Developer | [PopSockets](#) (May 2015 - August 2015)

- Developed a Shopify storefront for PopSockets - a shop selling grips and accessories for mobile devices.
- Built templates & responsive client-side tools for customizing products.
- Improved interactions using `CSS3` features like `flexbox layouts` and `CSS animations`.

Instructor | University of Colorado, Boulder (August 2013 - May 2014)

- Developed supplementary curriculum for intro philosophy courses of more than 100 students.
- Provided instruction and test prep for courses in metaphysics, ethics, history of philosophy, philosophy of science fiction, critical thinking, logic, writing, and others.

Personal Projects and Open Source Work

ThingsSDK (2016)

- Contributor to open source suite of tools for writing and running `JavaScript` directly on micro-controllers.
- Added testing and CI to the project using `Mocha` and `Travis CI`.
- Improved command line experience by adding fail-safes, colorized output, and other additions.
- Core contributer to documentation and guides.

CounterWatch (2016)

- A Skill for Amazon's natural language platform `Alexa` that reports the ideal counter for any Overwatch character on demand.
- Written in `Node` and deployed via `AWS Lambda`.

Recent Volunteer Experience

Front-end Developer | XRAY.FM (December 2015 - Present)

General web design and development. Built mobile-first / responsive pages, integrated with remote payment service. For example: the XRAY membership page

Full-Stack Developer | Faunalytics (August 2016 - June 2017)

General web design and optimization of their high-traffic `Wordpress` site. Manage a distributed team of volunteers using tools like Github, Slack, and Trello. Includes extensive work on their data visualization and charting tool Animal Tracker.

Education

MA, Philosophy | University of Colorado, Boulder (2012-2014)

Emphasis in metaphysics, philosophy of language, & ethics. Thesis: *Vagueness & Fundamentality*, 2014

BA, Philosophy | Western Washington University (2009-2011)

Paul J. & Rebecca Olscamp Scholarship 2009-2011. Outstanding Graduate, 2011. Vice President of Philosophy Club, 2010-2011.

Full-Stack JavaScript | Portland Code School (2015)

Presentations

[Migrating to GraphQL in Production](#) | [GraphQL PDX](#) (April 2017)

Why its worth migrating from REST API's to `GraphQL` in production, and why the transition is inevitable anyway.

[Modular GraphQL Projects](#) | [GraphQL PDX](#) (February 2017)

How to keep development small and modular using schema-driven development with `GraphQL`.

Prototyping with React and Firebase | [Portland ReactJS](#) (August 2016)

Prototyping with React can be daunting when it comes with setting up `Redux` flows and editing `Webpack` config files. With the new `Firebase` API, you can skip all of that for dependable, scalable prototypes that are easy to use and understand.

How to Get Started with Elm | [Portland Elm Group](#) (April 2016)

An introduction to some fun `Elm` tools and open source `Elm` projects seeking participants.

What is Elm? | [JavaScript Admirers](#) (March 2016)

An introduction to the `Elm` programming language in the context of modern JavaScript development.

Portland Elm Meetup Group Founder | [Portland Elm Group](#) (March 2016 - June 2017)