Ben "Fuzzy" Weissmann

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Skills

- **Computer Languages:** Extensive experience with Javascript/NodeJS, Typescript, Go, Ruby, Python, Java, HTML, CSS, Bash, SQL. Limited experience with PHP and C++.
- **Libraries and Frameworks:** React, Redux, jQuery. Meteor, Electron, Ruby on Rails, Sinatra, Django.
- **Databases, Tools, and Infrastructure:** PostgreSQL, MongoDB, Redis, RabbitMQ. AWS, Kubernetes, Docker, Terraform, Chef, Packer. Webpack, ESLint, Flow. Jenkins, Go.CD, Concourse.
- **Operating Systems:** Mac OS X. Ubuntu, Debian, and Fedora Linux.

Education

Massachusetts Institute of Technology **Cambridge, MA**
B.S. in Computer Science; Humanities concentration in Writing · Cumulative GPA: 4.6/5.0 June 2014

Selected Coursework: Network and Computer Security, Computer Graphics, Computer Vision, User Interface Design, Computer Systems Security, Design and Analysis of Algorithms, Computation Structures, Linear Algebra, Differential Equations, Multivariate Calculus, Discrete Mathematics

Relevant Experience

Tulip (`https://tulip.co`) **Somerville, MA**
First Employee, Software Engineer, Architecture Lead September 2014 - Present

- As first employee, architected, designed, implemented, tested, and deployed a web-based system for creating instrumented, connected apps for the manufacturing shop floor.
- Developed web-based software using NodeJS, React/Redux, Go, MongoDB, Postgres, Redis, and RabbitMQ.
- Created processes for testing, deploying, and monitoring software in use for production-critical manufacturing applications.
- Held broad architectural and implementation responsibilities across front-end and back-end software development, database management, technical operations / DevOps, product design, and interaction with customers' IT.
- As the team grew from 3 to 60+, worked on recruiting, mentorship, team organization, roadmap planning, and coordination with business development and customer operations teams.

MIT Media Lab **Cambridge, MA**
Undergraduate Researcher June 2009 - August 2014

- September 2011 - August 2014: Developed Lens, a web-based Javascript framework for creating projected augmented reality application for the LuminAR platform. Created a Meteor-based backend to analyze collected data in real-time and provide a graphical environment for authoring augmented reality content.
- February 2011 - May 2011: Designed and implemented a Python framework to wrap a C++ gesture recognition library.
- June 2010 - August 2010: Developed visualization and data mining tools using Ruby and Java, and designed and created a website using Ruby (Sinatra Framework), HTML, CSS, and Javascript/AJAX.
- June 2009 - August 2009: Worked on Cartagen (`http://cartagen.org`), a dynamic mapping framework, developing user interface components and data structures in Javascript, HTML5, and the Ruby on Rails framework.

Twitter, Revenue Quality Team **San Francisco, CA**
Software Engineering Intern May 2012 - December 2012

- Architected and implemented Clockwork Raven, an open-source, web-based tool for human-powered data analysis using Mechanical Turk. Developed with Ruby on Rails, the jQuery Javascript framework, and the Bootstrap CSS framework. Used by multiple teams at Twitter to gather tens of thousands of judgments weekly. Code: `https://github.com/twitter-archive/clockworkraven/`

TripAdvisor, Commerce Team **Newton, MA**
Software Engineering Intern December 2010 - August 2011

- June 2011 - August 2011: Updated advertising budget forecast system to create a real-time calendar to summarize advertising budgets using Ruby on Rails. Restructured internal data structures to allow easy updating of specific parts of the website, including updates to TripAdvisor's main Java codebase, and the Ruby on Rails data manager.
- December 2010 - January 2011: Prototyped a distributed system to predict how changes in advertising configuration would impact clickthrough and sales, running on a small cluster of machines using the Hadoop Map/Reduce framework.

Publications and Projects

Typing the Untyped **Strange Loop**
Soundness in Gradual Type Systems September 2019

- A conference talk about soundness and completeness in gradual type systems, including topics in covariance/contravariance, flow-sensitive typing, and gradual type system design.
- Video: `https://www.youtube.com/watch?v=uJHD2xyv7xo`. Slides: `https://bit.ly/sl-types`