Autumn Fjeld

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EDUCATION

Software Engineering Immersive JavaScript & Modern Frameworks — *Hack Reactor, San Francisco*
Ph.D. & M.S. Materials Science & Engineering — *University of California, Berkeley*
B.S. Chemical Engineering, *Magna Cum Laude* — *Arizona State University*

LANGUAGES & TECHNOLOGIES

- Proficient: JavaScript, HTML/CSS, AngularJS, Firebase, d3.js, Ionic, Cordova, Matlab, Jasmine
- Familiar: Scheme, C, Backbone, jQuery, Node, Python, Ruby, Sinatra, CoffeeScript, Protractor

SOFTWARE EXPERIENCE

Plentyy — San Francisco, CA 2014

Mobile app that connects users to last-minute bargain deals with local merchants

- Designed back-end schema in Firebase, chosen for Simplelogin authentication, direct database reference binding, and fast prototyping for MVP.
- Built app functionality in AngularJS architecture, ported to mobile with Cordova and styled with Ionic. Careful attention given to AngularJS controller and service modularity to create efficient team workflow.
- Will be released by client in App Store and Google Play Q2 2014.

WikiViz Project — San Francisco, CA 2014

Visualization tool of relationships between Wikipedia articles

- Built a d3.js interactive force directed graph in an AngularJS directive, allowing users to click on a url-node to create an expansive node map of Wikipedia articles.
- Built AngularJS controllers and services to communicate with back-end API, parsing returned data to d3.js algorithm. wikivizmap.herokuapp.com

Political Poke — San Francisco, CA 2014

- Hackathon project built in AngularJS, users enter a politician's name to retrieve political campaign contribution data pulled from New York Times API. politicalpoke.nmutua.com

TECHNICAL EXPERIENCE

Technical Support Engineer – NUMECA International — San Francisco, CA 2010–2013

Engineering Support & Business Development

- Provided technical support to engineers at Boeing, Honeywell, etc. using NUMECA's computational fluid dynamics software tools, delivering solutions in meshing, solver setup, and post-processing.
- Improved software as an integral part of the feedback loop for identifying and troubleshooting software bugs, user-friendliness, and scientific accuracy issues.
- Delivered technical training webinars twice a month to NUMECA's user base. Led major overhaul of webinar training materials and style of presentations.

Freelance Science Editor — Global 2010–2014

Editor of scientific manuscripts for non-native English speakers

- Edited scientific manuscripts for non-native English speakers leading to publication in high profile scientific journals.
- Created www.science-edit.com (built with Joomla) to advertise my services. Brought in business by advertising in Austrian social media. Performed contract work for American Journal Experts, a global editing service for scientists.

Post Doctoral Research – University of Leoben, Austria

Simulation & Modeling of Metallurgical Processes — Leoben, Austria 2006–2010

- Created a computational model of a large casting process to simulate flow and heat transfer phenomena for an Austrian steel making company.

- Expanded functionality of commercial simulation software with user defined functions in C and data processing scripts in scheme. Used Matlab extensively for data analysis.
- Defined experimental investigations for industry partner to get input and validation data for simulations.
- Tested feasibility of open source simulation framework, OpenFOAM.

Ph.D. – University of California, Berkeley
Materials Science & Engineering Berkeley, CA 2001–2006

- Collaborated in a five year project with Alcoa, Inc. to optimize a molten aluminum purification process, with specific goals to reduce toxic chloride emissions and improve energy efficiency.
- Ran fluid dynamics simulations of the purification process to assess mixing, residence time, bubble distribution to find optimum operating conditions, validating results with experimental data.
- Built a bubble probe to use in motel aluminum experiments to detect capacitance change on bubble contact.
- Received student nominated outstanding teaching award as graduate student instructor for undergraduate materials science lab.

M.S. – University of California, Berkeley
Materials Science & Engineering Berkeley, CA 1999–2001

- Researched and developed experimental thin films for supported liquid membranes for aqueous filtering of acetic acid.
- Investigated processing techniques and properties of epoxy films applied to a membrane surface to seal liquid extractant into pores of supporting membrane.

ABOUT

- Traveling and checking out the world is a must. Most free time goes to reading or finding hidden stairways in SF. Started weekly German-learning conversational group for foreigners in Leoben, Austria. Love to sew and create colorful clothes and bags.