Annie Ritch

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Full-Stack Software Engineer

I am a full-stack web developer with a background in the earth and environmental sciences, and I hope to utilize my skills for a company whose mission is aligned with promoting science and sustainability.

Technical Skills

Languages: JavaScript, Ruby, Python, Swift, R
Front End: React/Redux, AngularJS, HTML5, CSS3, jQuery, Bootstrap, AJAX, HTTP Request/Response, iOS
Back End: Node.js, Express, Socket.io, Rails, MongoDB/Mongoose, MySQL, Flask, Django
Other: Git, Github, AWS, RESTful Architecture, MVC

Web Development Projects

eyeChat | github.com/ajritch/eyeChat

- Multi-room chatting application in which users can communicate with just the blinking of their eyes
- Inspired by individuals affected by locked-in syndrome
- Two-person team; I wrote the back-end and most of the user interface logic
- HTML5, CSS3, jQuery, Socket.io, AngularJS, Mongoose, Express, Node.js, headtrackr.js, blink-detect

Halo | github.com/ajritch/halo

- Facial recognition application that can be used to identify at-risk homeless individuals
- Built in 24 hours for the Hack Homelessness Hackathon in San Jose (September, 2016)
- Four-person team; I wrote the entirety of the iOS application and assisted with the MEAN backend
- Swift 2, iOS 9, HTML5, CSS3, MEAN stack, Kairos Facial Recognition API

Outdoorsy | github.com/ajritch/Outdoorsy

- Web application where users can search, share advice, and get directions for any outdoor location in the world
- Extensive AJAX use allows for map manipulation without page refreshes
- HTML5, CSS3, jQuery, Python, JavaScript, Flask, MySQL, Google Maps API, Open Weather Map API

Professional Experience

Oh My Green | *San Mateo, CA* | March, 2017 - present
Full-stack development (75% frontend, 25% backend) using React and Rails to build internal and customer-facing applications for a company providing health snacks, beverages, and catering services to corporate offices.

- Re-built responsive customer-facing analytics platform with loading times decreased by a factor of 5
- Constructed customer-facing rating system to improve demand forecasts for catering services
- Developed multiple internal tools to improve product management and to streamline the process of ordering product from vendors

Graduate Student Researcher | *Stanford University, Department of Earth System Science* | 2014 – 2016
Utilized reanalysis data, HYSPLIT back-trajectory modeling, and reactive transport modeling to track the stable isotopes of vapor and precipitation along a storm track. Combined lake modeling with isotope mass balance to determine precipitation recycling ratios. Field experience collecting water and carbonate in the Zaysan Basin in Kazakhstan.

- Developed algorithm to efficiently manipulate 90GB climate dataset
- Improved lake model estimates by 20% by deriving new lake level-isotope relationship
- Co-instructed a field course for undergraduates in the Rocky Mountains and a proposal-writing course for graduate students

Education

Stanford University | Stanford, CA
M.S., Earth System Science | 4.0 GPA | June, 2016

California Institute of Technology | Pasadena, CA
B.S. with Honors, Geochemistry | 3.6 GPA | June, 2014