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Kathryn Barnes
Software Engineer

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Technical Skills

Strong: JavaScript, Matlab, Angular, React, Express, Node, MongoDB, FirebaseDB, Git
Experience: jQuery, Python, MySQL, HTML/CSS, Sass, C++, Java, C#, Tcl, LabView, Simulink, Mathcad, SolidWorks, Creo Parametric

Professional Experience

Oracle   2012 - 2016
Hardware Engineer in Advanced Archive Development   *Burlington, Massachusetts*

- Executed experiments on media samples and analyzed results using Matlab, JavaScript, proprietary software, and hardware platforms and maintained large data sets of experimental results
- Augmented existing Matlab scripts used in capturing and analyzing data and distributed scripts through BeehiveOnline internally and to partnering company for use in experiments to maintain consistency and efficiency between locations
- Modified test hardware platforms to optimize mechanical drive layout performance based on experimental results
- Made recommendations for future sample development to partnering company based on experimental analysis

Hewlett-Packard Company   2011
Summer Intern in Writing Systems Engineering   *San Diego, California*

- Designed hardware integration diagnostic printing tests for inkjet web press printers using Python and C#

Education

Massachusetts Institute of Technology   2012
Bachelor of Science in Mechanical Engineering   *Cambridge, Massachusetts*

Hack Reactor   2016
Advanced Software Engineering Immersive Program   *New York, New York*

Projects

SlackR:chat   slacker-chat.herokuapp.com

- Incorporated Giphy API calls into chatting functionality, saving giphy urls to MySQL database and configured feature to display emojis in message body
- Established image file uploading capability in profile modal through Express/Node server to Cloudinary and subsequently rendered profile pictures in chat body
- Crafted administrator analytics page with visual graphs of messages from the past week broken down by channel or user
- Configured authentication, hashing and storing passwords in MySQL database and restricting routes with JWT

Snappy Dish   snappydish.herokuapp.com

- Constructed feature to upload food images to Imgur API and stored url reference with Google Places location ID to FirebaseDB using an Express/Node server
- Created trending food pictures page view in Angular getting image information from FirebaseDB
- Rendered Google Maps location using an Angular Google Maps directive and information from the Google Places API

Visual News   legacy-owls.herokuapp.com

- Refactored front-end of inherited web application that queries the New York Times API from React to Angular
- Routed article data to MongoDB by refactoring existing Express/Node server routes and modifying database schemas to persist article information and number of likes
- Incorporated and styled modal feature using an Angular modal service and Sass to display additional article information

SeeFood   seefoodseeyourfood.herokuapp.com

- Architected single page picture based food visualization tool which queries NutritionIX API using MongoDB, Express, Angular, and Node

Patent

Helmet dispensing system.U.S. Patent 9,320,364, filed July 2, 2014 and issued April 26, 2016

Personal

I enjoy experiments with baking, particularly with stuffed cookies. I am also an enthusiastic and slow long distance runner and ran two half marathons, one Spartan Sprint, one 10k, and two 5ks in 2016.