# **Kathryn Barnes**

Software Engineer

<u>linkedin.com/in/ktbarnes</u> <u>github.com/ktbarnes</u>

## **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

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

### **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

#### 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.