

Ruth Dolly Johnson

ruthjohnson@ucla.edu | (559) 802-2442 | linkedin.com/ruthjohnson13 | ruthjohnson.me

Education

University of California,
Los Angeles

Graduating June 2017

Math/Computer Science

Minor in Bioinformatics

GPA 3.4

Alpha Lambda Delta
Honor Society

Skills

C/C++ 

Python 

HTML/CSS 

Matlab 

Other tools:

ReactJS, Shell/Bash,

Autodesk

>> Work Experience

Sandia National Laboratories | R&D Engineering Intern June 16' - Current

- Increased the accuracy of machine learning based algorithms used for anomaly detection using DBSCAN and One-Class SVM algorithms
- Created a Python library for gathering satellite data from online database, improving overall efficiency of data collection and analysis pipeline
- Implemented a UI for various tools of an enterprise software using ReactJS and ExtJS

Bogdan Population Genetics Lab | Undergraduate Researcher March 16' - June 16'

- Created command-line tool to produce data visualizations of SNPs and functional annotations to assist with classification of causal SNPs for complex traits and diseases
- co-author (publication pending): *Improved methods for multi-trait fine mapping of pleiotropic risk loci*
- submitted abstract to ASHG Conference: *Visualizing correlated causal variants*

Daily Bruin | Web Developer Sept 15' - June 16'

- Developed front-end for news features and quarterly projects using Bootstrap, Foundation, jQuery, git, Handlebars
- Helped develop the main election page used to publish updates and candidate information for the 2016 USAC election

>> Projects

RoboHome | IDEA Hacks | Overall First Place Winners

- IoT themed smart home model with automatic lighting, doors, T.V., and shower controlled via Android app, Myo, and webpage; used Arduino Uno, C, JavaScript

Freeloader | SB Hacks | Popular Choice Award

- Web application that parses for free events and food by parsing through a user's Facebook profile and groups; Facebook API, Bootstrap, HTML/CSS

Alexa M.D. | Tree Hacks | Best use of Amazon Echo, Best Medical Wearable

- Exposure therapy project that uses the Oculus Rift and Amazon Echo to create an interactive environment for user to face phobias, as well as an automated pill dispenser

CAN-vis | ASHG 2016 Conference

- data visualization tool that provides publication read figures for fine-mapping studies; available as a web interface or command line tool; used Flask, Python, HTML/CSS, Heroku

HappyHour | Hack the North | Winner of Best Uber Hack

- Pebble watch application that monitors drink intake and calculates BAC level, and uses Uber API to enable user to get Uber information on their watch

MyoMessenger | Cal Hacks 2.0 | Top 4 Finalists

- Created a safer driving experience by using Myo armband to send messages through simple hand gestures and Muse's headband's accelerometer to detect when drivers were falling asleep

Coursework

Data Structures

Algorithms

Mathematical Modeling

Linear Algebra

Real/Complex Analysis

Numerical Methods

Statistics