

Ruth Dolly Johnson

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

//Education

**University of California,
Los Angeles**

Class of 2017

Math/Computer Science

Minor in Bioinformatics

GPA 3.5

Alpha Lambda Delta
Honor Society

//Skills

C/C++



Python



HTML/CSS



Matlab



Other tools:

Bash, ReactJS, Git

//Coursework

Data Structures

Algorithms

Mathematical Modeling

Real/Complex Analysis

Applied Numerical Methods

// Work Experience

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

- Doubled the accuracy of machine learning based algorithms for satellite anomaly detection software
- Created Python library for gathering satellite data from online database, improving overall efficiency of pipeline
- Implemented a UI for various tools of enterprise software using ReactJS

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

- Created command line based software that produces data visualizations of SNP relationships and annotations in the genome
- Used tool to improve identification of causal SNPs for complex traits and diseases
- Submitted paper outlining the tool to Bioinformatics Journal as a co-author

Center for Tropical Research | Undergraduate Researcher Sept 15' - June 16'

- Utilized and updated software pipeline to analyze RADseq data of tropical species
- Used bash scripts to compare quality of data and analyze efficiency of hyper-parameters
- Ran Stacks software to filter reads, eliminate PCR duplicates, and identify loci through denovo mapping techniques

// 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
- Powered home through Arduino Uno, and assembled using 3D printed components and various soldered components

HappyHour | Hack the North | Winner of Best Uber Hack

- Pebble watch application that monitors drink intake and calculates BAC level throughout the night, and alerts the user when reaching legal limits
- Used 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
- Used the Muse headband's accelerometer to detect when drivers were falling asleep, and then notified user