

Ruth Dolly Johnson

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EDUCATION

University of California, Los Angeles | PhD Computer Science | June 2017-Present

University of California, Los Angeles | B.S. Mathematics/Computer Science | GPA: 3.4/4.0 | Sept 2013-June 2017



EXPERIENCE

University of California, Los Angeles | Undergrad Bioinformatics Researcher | June 2017-Present

- Created data visualization tool, PAINTOR-CANVIS, which produces publication-ready figures of fine-mapping studies
- Conducted fine-mapping studies on a collection of traits in order to prioritize causal variants

Sandia National Laboratories | R&D Software Engineer | Albuquerque, NM | June 2016-August 2016

- Created a Python library for gathering satellite TLE data from online database and implemented satellite maneuver pipeline which uses DBSCAN algorithm to identify anomalies in satellite orbits
- Designed a web UI for portions of satellite ground-station enterprise software using ReactJS and ExtJS

Center for Tropical Research | Undergrad Research Assistant | Los Angeles, CA | Sept 2015-June 2016

- Utilized and updated software pipeline to filter reads, eliminate PCR duplicates, and identify loci through denovo-mapping for various tropical species
- Fine-tuned hyper-parameters in the sequence assembly algorithm to improve the reproducibility and quality of the results



PROJECTS

RoboHome | IDEA Hacks | [1st Place](#)

- 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

Alexa M.D. | TreeHacks | [Best Medical Wearable](#), [Best use of Amazon Echo](#)

- 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

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



SKILLS and COURSES

- C/C++, Python (and Flask), JavaScript (ReactJS, ExtJS), R, Matlab, shell scripting
- Data structures, operating systems, algorithms, mathematical modeling, numerical methods



AWARDS

- NSF Graduate Research Fellowships Program – Honorable Mention
- Undergraduate Bioinformatics Research Award
- Dean's Prize for Excellence at Research Poster Day
- Chancellor's Service Award
- Alan Hanson Academic Integration Award