

## Charles Dickens

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### EDUCATION

**University of California Santa Cruz**, Santa Cruz, Ca.

*PhD.*, Computer Science

**University of Hawaii**, Manoa, Hi

*B.S. with Summa Cum Laude*,

Computer Engineering and Mathematics Minor, May 2019

GPA: 3.93

### EXPERIENCE

#### Teaching Assistant

UCSC

September 2019 - Present

Santa Cruz Ca.

TA for UCSC CSE Introduction to Algorithms and Analysis

- Attended and presented lectures
- Prepared sample solutions to homework problems for graders

#### Data Science Intern

Clari

June 2019 - September 2019

Sunnyvale Ca.

Researched methods and applications for a new sales opportunity similarity metric.

- Developed and verified methods for measuring the similarity between deals.
- Demonstrated applications of the metric to department executives.
- Created a roadmap for scalable implementation of the feature.
- Created a UI framework for future demos with REACT, SemanticUI, and D3.js.

#### Computer Engineer Intern

University Health Partners of Hawaii

April 2019 - June 2019

Honolulu Hi.

Utilized H2O, MapR, and SQL to develop a pipeline for triaging documents for review.

- Improved model performance by implementing procedures for hyperparameter optimization, model selection, and feature space dimension reduction.
- Developed scalable pipelines for prediction and training.
- Added functionality to extract human interpretable information as to why documents were marked for review.

#### Data Science Fellow

Hawaii Data Science Institute

June 2018 - June 2019

Honolulu Hi.

Contributed to data science products and applications across a range of disciplines.

- Wrote a course on data wrangling with Python and pandas using Jupyter.
- Planned and led workshops on Data Science topics.

#### Math and Science Tutor

Online Learning Academy

December 2016 - August 2018

Honolulu Hi.

Tutored STEM related courses from grade school up to the sophomore college level.

### PROJECTS

#### Developer: CSDL: Open Power Quality:

OPQ is an open source solution for distributed power quality data collection, analysis and visualization.

- First author of an accepted paper presented at The Ninth International Conference on Smart Grids, Green Communications and IT Energy-aware Technologies in Athens, Greece: IARIA ENERGY 2019.
- Developed plugins to classify frequency disturbances and transients using state of the art digital signal processing and machine learning techniques.

#### Co-PI: UH Big Data Lab and CSOI: The Polarization of Information:

How can we develop a graphical representation of related text based information found on the web? With this model, how can we measure the polarity between different schools of thought?

- Built scrapers to find relevant sources and utilized Social Network APIs to collect and store data in a MySQL database.
- Implemented novel machine algorithms to model the data and identify clusters.
- Project funded by the NSF Center for Science of Information.
- On-boarded a team of 4 researchers from various Universities.

## COMPUTER SKILLS

**Languages:** Python, R, C, C++, Java, Matlab, SQL, L<sup>A</sup>T<sub>E</sub>X.  
**Web:** HTML, JavaScript, MongoDB, Meteor, React, Semantic UI  
**Applications:** Vi/Vim, JetBrains IDEs, Git/GitHub, VirtualBox

## VOLUNTEER and NON-PROFIT WORK

**Student Volunteer** IEEE Infocom  
 2018 Honolulu Hi.  
 Aided presenters and event organizers at the IEEE Infocom conference.

**Mentor** UHM COE  
 Jun 2017 - August 2017 Honolulu Hi.  
 Taught students fundamentals data science skills and guided them through a project over the 6-week course.

## TRAININGS and WORKSHOPS

**Researcher** Intelligent Systems for Geosciences  
 August 2018 UH Hilo  
 Worked with domain scientists to develop sensors and propose new directions for research and collaboration.

- Built a dual spectrum imaging sensor using a Raspberry Pi to periodically capture photos of the active fissure. Stored the data on AWS cloud storage.

**Team Leader** Data Science and Interdisciplinary Teams  
 June 2018 Purdue University  
 Invited as team leader for a group of 5 students from Universities across the country and at levels ranging from Undergraduate to PhD candidates.

## AWARDS

**UCSC Regents Fellowship**  
**NSF CSoI Channels Scholar REU Award**  
**Dean's List 10 Semesters**