

# Shanal (Dre) Mahaarachchi

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## OVERVIEW

An ambitious software engineer eager to learn about and implement full stack technologies and data science methods. Interested and adept in integrating data visualization with the user experience.

## EDUCATION

### UNIVERSITY OF CALIFORNIA, BERKELEY

ELECTRICAL ENGINEERING AND  
COMPUTER SCIENCE – BS

Expected May 2020

Cum. GPA: 3.55 / 4.00

Honors: Dean's List (2018)

## LINKS

 drehanm.github.io

 github.com/drehanm

 linkedin.com/in/dre

## COURSEWORK

### UNDERGRADUATE

Algorithms & Intractable Problems

Database Systems

Data Structures

Computer Architecture

Circuits & Applied Linear Algebra

Signals, Controls & Applied LinAlg

Intro to Probability

## SKILLS

### LANGUAGES

Python • Java • C

Javascript • HTML/CSS •  $\text{\LaTeX}$

SQL • Shell • Assembly

### FRAMEWORKS & TOOLS

Django • Flask • React

Pandas • Numpy/Scipy • PyQt

Git • AWS • Excel

## COMMUNITY

### ORGANIZATIONS

iSTEM Without Borders • Director

Chi Psi Fraternity • Scholarship Chair

### SERVICES

Volunteer Tutor for Computer Science

## EXPERIENCE

### JET PROPULSION LAB – NASA

PASADENA, CA

SOFTWARE ENGINEERING INTERN

JUNE 2018 – AUG 2018

- Worked closely with distinguished researchers in Infrared Photonics Group to improve analytics procedures for infrared detector analysis.
- Decreased turnaround for device analysis by 150% by designing and implementing IRIS, an interactive analytics app written in Python.

### RHEW RESEARCH LAB – UC BERKELEY

BERKELEY, CA

ENGINEERING APPRENTICE

DEC 2017 – PRESENT

- Spearheading design/development of several applications designed to provide visualizations of climate data harvested near Tahoe, CA.
- Developing scripts to automate and augment laboratory processes.
- Integrating lab resources through GitHub and Slack.

### EECS – UC BERKELEY

BERKELEY, CA

LAB TEACHING ASSISTANT

DEC 2017 – PRESENT

- Administering lab sections of 30+ students for an undergraduate electrical engineering course.
- Assisting students with EE fundamentals, including but not limited to: Circuit Analysis, Signals, Controls, PCA, SVD, DFT.

### COMNETS – UNIVERSITÄT BREMEN

BREMEN, GERMANY

SOFTWARE ENGINEERING INTERN

MAY 2017 – JULY 2017

- Designed and implemented ROM, an IoT sensing module that can detect the number of people in a room and remotely report the data to a server.
- Experimented with various sensing technologies and network architectures.

## SELECTED PROJECTS

### ESPRESSO | JAVA

IN PROGRESS

An SQL-like database system that can parse SQL commands to create/update/read database objects.

### TIMESHEET | FLASK, SQLITE3, REACT

IN PROGRESS

A web app designed to track and organize time spent on tasks.

### LYREQ | PYTHON

JULY 2018

A web scraper that creates an image depicting a song's lyrical repetitiveness (using Song Sim) for a given artist and song title.

### GITLET | JAVA

DECEMBER 2017

A lite version of Git version control, complete with the ability to commit, branch, checkout, and merge.