

# MARCO MERCADO

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## EDUCATION

### California State Polytechnic University Pomona

*Master of Science in Computer Science*

**Expected 2021**

**GPA: 4.0/4.0**

- Relevant Courses: Deep Learning, Software Engineering, and Advance Computer Architecture

### University of California Riverside

**2018**

*Bachelor of Science in Applied Mathematics in Computer Science*

**CSGPA 3.58/4.0**

- Courses: Data Structures & Algorithms, Database Management Systems, Machine Learning, & Architecture of Computer Systems, OS Design.
- Dean's List.

## TECHNICAL STRENGTHS

<b>Languages</b>	<b>Proficient:</b> C/C++, Python <b>Familiar:</b> JavaScript, Java, MATALB, SQL, BashScript, HTML/CSS.
<b>Tools</b>	<b>Proficient:</b> TensorFlow,Git,Numpy <b>Familiar:</b> Virtual Box,Docker, Express, MongoDB, NodeJS, openCV.
<b>Other skills</b>	Linux, Object Oriented Programming,Scrum, Software Development Life Cycle(SDLC).

## EXPERIENCE

### Research Assistant (Project lead)

**Jun 2019 - Present**

*California State Polytechnic University, Pomona*

*Dr. Raheja*

- Mobilize a group of undergraduate students to develop an autonomous weed detector and remover.
- Train and Compare deep learning object detection algorithms using TensorFlow to detect varies types weeds.
- Process multispectral images of crops and used deep learning to predict NDVI, Height, and chlorophyll

### Research Assistant

**Feb 2019 - Present**

*California State Polytechnic University, Pomona*

*Dr. Husain*

- Mentor a student on Big data approach to brainwaves bio-metrics in a REU funded by National Science Foundation
- Lead and plan the collection of brainwaves data on humans for a new type of bio-metric authentication system.
- Develope a feature selection algorithm to choose frequency bands with Numpy, Pandas, and Scikit-learn.
- Designed a web app that applied processing, feature abstraction, and machine learning algorithms to brainwaves.

### Grader Numerical Analysis

**Sept 2019 - Present**

*California State Polytechnic University, Pomona*

- Graded midterms, final exams, and lab assignments for 30+ student class while providing feedback on code.

### Undergraduate Research Assistant

**April 2018 - Dec 2018**

*University of California, Riverside*

*Dr. Keogh*

- Designed algorithms that compare different time series for similarities and output a visualization using MATLAB.
- Analyzed time series of stars and search for points of interest that helped classified the time series.
- Implemented time series anomaly algorithm to the detect anomalies among a given set of time series.

## PROJECTS

### My Photograph Gallery JavaScript,Heroku, NodeJS, Express, EJS, MongoDB, HTML, CSS **Sept 2019 - Present**

- Developing a web app where I post my photography work with JavaScript, Node.js, Express, MongoDB, and bootstrap
- Setup a continuous integration and deployment pipeline for my application that runs test and delivers product.

### Graphics Pipeline C++

**Dec 2018**

- Implemented a graphics pipeline included color, customize size, perspective transformation, similar to OpenGL.

### Rshell C++, Bash Script

**June 2017**

- Designed a UNIX shell like program using the command pattern, and Objected Oriented programming
- Implemented unix shell features such as && , ll , () precedence, checking if a file or directory exist, and piping.

### Airline Database Java, PostgreSQL

**April 2018**

- Designed a Database schema for an airline using ER diagrams, and PostgreSQL.
- Implemented queries for flight-search,and number of available seats for a given flight, and Book a Flight.
- Collaborated with a partner to implement the database, meet deadlines, by using git as our version control.