

# ALBERTO VALLE

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## EDUCATION

**University of California, Merced**

May 2022

Bachelor's of Science in Computer Science & Engineering

GPA: 3.926

**Relevant Coursework:** Data Structures, Object Oriented Programming, Algorithm Design and Analysis, Databases, Operating Systems, Computer Networks, and Machine Learning

## TECHNICAL AND LANGUAGE SKILLS

Programming Languages: C++, Python, Java, JavaScript, HTML, SQL, NoSQL

Language: English, Spanish

Frameworks/Libraries: Flask, PyTorch, Sklearn, Pytest, React.js, D3.js, Selenium

## PROFESSIONAL EXPERIENCE

**Software Engineer – Full Time**

*Omron Robotics and Safety Technologies*

June 2022–Present

- Configured and tested web server to reverse proxy IP and allow livestreaming of mobile robot information
- Contributed to development and improvement of 6 endpoints for REST APIs written in python
- Reported and reproduced 8 high priority bugs 1 week before the release of Beta software
- Resolved 1 low priority issue during 2 weeks sprint by testing mobile robot sensors and docking implementation

**Software Engineer - Intern**

*Omron Robotics and Safety Technologies*

Jun–Aug 2021

- Designed production REST API using python and NoSQL database
- Created position density map for mobile robots with D3.js for a data analytics web app
- Reduced map rendering time from ~2 sec to ~300ms for maps with +70k data points by optimizing the DOM size

**Researcher - Intern**

*Historic Places Merced*

May-Aug 2020

- Automated the acquisition and preprocessing of +2500 images for the training of a machine learning model
- Trained model using PyTorch with 62% accuracy for the segmentation of historical houses in Merced
- Contributed +2500 images of historical houses used for research to the Merced Arches Data Management System

## LEADERSHIP EXPERIENCE

**Lead Software Engineer**

*Innovate to Grow – UC Merced*

Jan-May 2022

- Developed predictive maintenance dashboard for Omron's 4-axis fixed robots as final senior university project
- Worked as a full stack developer building the database, API, and chart visualization of a web dashboard
- Directed technical design and 4 students where the team won 1<sup>st</sup> place in user experience among 7 other teams

**Workshops Collaborator and Mentor**

*Society of Hispanic Professional Engineers (SHPE)*

Aug 2019-May 2022

- Enrolled in mentorship program helping 1 student with career and class advice
- Practiced social and leadership skills by networking with +30 students and faculty during weekly meetings

## PROJECT EXPERIENCE

**Fitness-Tracker**

- Created web app using SQL, Flask, and D3.js to track progress and visualize user's workouts and diets
- Presented application to +30 students as the final project for databases and scored 98%

**Client-Server Chat**

- Implemented flooding, neighbor discovery, distance vector routing, and TCP for computer networks class
- Directed the project design and group of 2 people where project outperformed class average by ~30%
- Experienced using event driven language (NesC) and embedded/component-based operating system (TinyOS)