DOMINIC V. ORLANDO

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EDUCATION

University of California, San Diego
BS in Electrical Engineering **Oct. 2020 - June 2024**

- Depth in **Machine Learning and Controls**
- **Relevant Coursework:** Linear Control System Theory; Linear/Nonlinear Optimization; Digital Systems; C Programming; Circuits and Systems; Deep Learning w/ Applications; Intelligent Systems & Robotics; Pattern Recognition & Machine Learning; Product Engineering; Signal Processing; Product Management; Autonomous Vehicles
- Member of Eleanor Roosevelt College, which requires advanced rhetorical coursework
- Provost Honors recipient seven quarters

WORK EXPERIENCE

Software Engineering Intern, Agile Displays **June 2023 - Present**

- Worked on a host of **C#** and **.NET** tools used during the manufacturing process
- Simultaneously created more "modern" versions of these tools utilizing **Python**, **JavaScript**, **Docker**, **PostgreSQL** and **WebUSB** with proprietary USB programming devices

Chief Technical Officer, Aegis **April 2023 - Present**

- Firmware for our first generation IoT home solution in **C++** using **PlatformIO**
- Implemented a **MQTT** communication system between individual devices and our central server
    - Won best MVP award out of all the teams in ECE 140B at UCSD

Undergraduate Researcher, University of California, San Diego (Dr. Prasad Gudem) **October 2022 - Present**

- Created first iteration of an IMU system to track orientation of a boomerang using **embedded C++**
- Developing computer vision algorithm using **OpenCV** in **Python** on drone footage to acquire position
    - Accuracy determined through comparison with position data from other methods

Instructional Assistant, University of California, San Diego **September 2023 - Present**

- IA for ECE 17: Object-Oriented Programming: Design and Development with C++

Engineering Intern, Capsulaser **June 2022 - August 2022**

- Implementation of simulation test bench for Capsulaser UI
    - **Verilog** coding for 2x Lattice FPGA + 2x Serial NVM based system
- Optimization of programming algorithm for analog NVM
    - Analysis of experimental results of programming effect vs Programming Pulse Voltage and Duration
    - Modification of embedded **C** code on programming system (MCU Based) for programming optimization

LEADERSHIP / AWARDS

President, UCSD Cycling Team **June 2023 - Present**

- Elected position, responsible for directing and running the team as well as communicating with UCSD Sports Clubs Administration.

Road Captain, UCSD Cycling Team **August 2022 - June 2023**

- Elected position, responsible for coordinating team rides, transportation and lodging for race events, and facilitating a healthy team culture encouraging students to ride bikes, go fast, and have fun.

Overall Runner-up, H.A.R.D Hack **April 2023**

- Received overall runner-up award in a hackathon at UCSD by working with four colleagues to develop a EMG equipped IoT device to remotely control servos connected to a web server with pages for data dissemination
    - Utilization of ESP32 and Raspberry Pi

SKILLS & ACTIVITIES

- Experience with Vivado, Lattice Diamond, ModelSim, PSpice, Java, JavaScript, HTML, CSS, Eagle CAD, MySQL, C++, embedded systems (auto ECMs, ANVM programmer), Linux-based servers, compiling source code, using virtual machines and environments
- Skilled at prototyping electrical circuits, including utilizing laboratory equipment and Arduino microcontrollers
- Design and implementation of performance modifications to BMW cars
    - Turbocharged e46
    - V8 swapped e36
- Native English speaker, conversational Spanish speaker