

# Ramaditya Kotha

Valencia, CA | 661-425-8663 | adi.k394@yahoo.com | US Citizen

## EDUCATION

---

### University of California, Los Angeles

December 2025

B.S. in Electrical Engineering

GPA: 3.95/4.0

- **Relevant Coursework:** Semiconductor Physics, Semiconductor Device Design, Systems and Signals, Principles of Feedback Control, Data Science, Applied Numerical Computing, Digital System Design

## WORK EXPERIENCE

---

### Digikey

June 2024 - Present

*Technical Marketing Engineering Intern*

Thief River Falls, MN

- Designed, programmed, and trained a TPU accelerated object detection neural network for a robot to locate and transport packages in a simulated industrial setting. Used Linux-based ARM cortex micro controllers with OpenCV, Mediapipe, and Tensorflow.
- Tested new products and created engineering demonstrations, writing 4 technical articles on wireless charging, machine learning and more!
- Designed a low-cost data-logging tote for factory lines with ATMEL micro controllers and C++. Processed data in Python and presented findings to reduce rejected and wasted inventory.

### UCLA Engineering 96: Underwater Robotics

April 2023 – Present

*Undergraduate Group Teacher*

Los Angeles, CA

- Created a curriculum to teach a class of 30 students on designing underwater robots with Altium, Solidworks, and embedded C++ software.

## EXTRACURRICULAR ACTIVITIES

---

### UCLA Baja SAE

*Technical Director*

May 2024 - Present

- Laid out vehicle design goals and led systems integration for a team of 70 multi-disciplinary engineers.
- Collected and analyzed over 30 million data points using Python and Matlab to improve vehicle design, dynamics, and controls systems in future design iterations.
- Analyzed transmission data in Python to reduce transmission size by 5% and solve vehicle integration issues.
- Created a detailed documentation website to preserve knowledge about vehicle electronics (rkotha.com).

*Controls Hardware PE*

May 2023 - May 2024

- Programmed and designed circuitry for the embedded hardware, peripherals, and power system for an automatic off-road transmission using Altium Designer, Falstad, and C++.
- Created a data collection system with live telemetry using Altium and C++, logging over 30 million data points in a single race.
- Unit tested electronics system with lab equipment and test bench simulations, leading to 100% electronics uptime at competition for the first time in 5 years.
- Improved RPM sensor processing algorithm using fundamentals of signal properties, reducing noise by 14% and phase lag by 50%.
- Wrote field testing plans to improve vehicle tuning in a variety of conditions, improving acceleration by 0.2 seconds.

## PROJECTS

---

- **VP Shunt Flow Sensor:** Worked closely with UCLA neurosurgeons to design a novel, implantable Ventriculoperitoneal (VP) shunt sensor to detect life-threatening post-surgical blockages based on principles of ion flow and hydrolyzation. Designed sensor body with Solidworks and circuitry with Altium designer.

## SKILLS

---

**Softwares/Tools:** Altium, Solidworks, LT Spice, Linux, CATIA, Git

**Programming Languages:** Python, Java, C & C++, Latex, Bash, MATLAB

**Spoken Languages:** Telugu (fluent), Spanish, English (fluent)