

SHREE VENKATESH

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EDUCATION

University of California San Diego

M.S. Computer Science

B.S. Computer Science

GPA: 3.63

Jun. 2026

Dec. 2025

EXPERIENCE

Amazon Web Services (AWS)

Software Development Engineer Intern

Sunnyvale, CA

Jun. 2025 – Sept. 2025

- Automated **patching** for the fleet of EC2 instances powering the Client VPN service, saving **2–3 engineer hours per week**.
- Implemented a **CI/CD pipeline with AWS CDK** for gradual deployment, ensuring safe rollouts and minimizing production risk.
- Improved fleet reliability by enabling **secure, zero-downtime updates**, maintaining compliance across all service instances.

UC San Diego Computer Science and Engineering Department

Instructional Assistant

La Jolla, CA

Sept. 2025 – Present

- Hosted labs hours **guiding ~120 students** through ISA design, building assemblers, and synthesizing SystemVerilog hardware.
- Aided **~30 students per week** with technical guidance on their project design and implementation during 1:1 office hours.

Triton Unmanned Aerial Systems

Embedded Systems Engineering Lead

San Diego, CA

Jun. 2024 – Present

- Engineered an autonomous payload-guidance system on **ESP32** in **C++** with **PID** to accurately drop payloads from **150ft altitude**.
- Built a signals board on **STM32** in **C**, processing thermistor data and communicating with the **Pixhawk** Orange Cube over **MAVLink**.
- Built the Controls and Mission Report Pages for the Ground Control System with **React** and **Go**, to view telemetry and edit parameters.

CSES Open Source

Engineering Manager

San Diego, CA

Sept. 2024 – Jun. 2025

- Led a team of **5 engineers** to build a finance app for UCSD students with the **SERN** stack with React Native following **AGILE** practices.
- Designed key features as a full-stack engineer, delivering a seamless frontend user experience and a scalable backend architecture.

PROJECTS

Tock Operating System | Rust

Mar. 2025

- Implemented a **Rust device driver** for an **ePaper display** on the **Nordic nRF52** platform running **TockOS**.

CNN Stock Prediction/Trading Algorithm | Python, TensorFlow, Keras

Mar. 2024

- Built a Convolutional Neural Network using **TensorFlow**, to predict the short-term behavior of any given stock with **79% accuracy**.
- Optimized model hyperparameters using **Keras Hyperband Tuner** to enhance prediction accuracy.

Specialized Microprocessor | SystemVerilog, Assembly, Python

Dec. 2024

- Built a **SystemVerilog** microprocessor to convert 16-bit two's complement integers to IEEE floating point and vice-versa
- Designed and implemented a custom reduced instruction set architecture (ISA), assembly language, and Python-based assembler.

Triton2Shop - E-commerce website | SQL, Express.js, React, Node.js,

Dec. 2024

- Developed a second hand e-commerce platform with the **SERN** stack exclusively for UCSD students
- Led a team of 6 following **AGILE** practices and enforced code quality via a **CI/CD** pipeline on GitHub Actions.

ACTIVITIES AND LEADERSHIP

Co-President

Triton Engineering Student Council

Jun. 2024 – Jun. 2025

San Diego, CA

- Managed board of **30+** in organizing events, outreach, and socials for the entire engineering student body at UCSD.
- Coordinated logistics for an engineering showcase and a career fair, reaching **1,000+ attendees** combined.

TECHNICAL SKILLS

Languages C, C++, ARM Assembly, System Verilog, Python, Java, Go, Javascript, Typescript, HTML/CSS, Bash, MATLAB

Technologies React, NextJS, Node.js, Flask, JUnit, Material-UI, FastAPI, Tailwind CSS, Firebase, Unity

Dev Tools Docker, Linux, Git, Pandas, Pytorch, TensorFlow, Keras, AWS CDK, GitHub Actions, WSL