SHREE VENKATESH

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EDUCATION

University of California, San Diego   San Diego, CA
Bachelor of Science in Computer Science   *Expected Graduation: Dec. 2025*
- **Coursework:** Advanced Data Structures, Digital System Design, Systems Programming, Machine Learning

EXPERIENCE

Embedded Systems Engineering Lead   Sept. 2023 – May 2024 (Engineer) | Jun. 2024 – Present (Lead)
Triton Unmanned Aerial Systems   *San Diego, CA*
- Engineered a servo-controlled autonomous payload-guidance system using an **Arduino-ESP32**, a BN-880 GPS/Compass Module and a Proportional Control Algorithm to safely and accurately drop payloads onto a target.
- Utilized a custom **UDP** network protocol to establish communication between the payloads and the Onboard Computer.
- Designed and built the Controls Page and Mission Report Page for the Ground Control System with a **React Typescript** Frontend, and a **Go** Backend, to visualize flight telemetry and change flight parameters.
- Collaborating with the team to design, build, and fly an Unmanned Aerial Vehicle.

Front-End Development Lead   Jan. 2024 – Present
Triton Engineering Student Council   *San Diego, CA*
- Led a team of three to redesign the main website for TESC with **React Typescript**, **SCSS**, and **Springboot**.
- Proposed an Internal Management Portal, and developed it using React, Springboot and a **PostgreSQL** relational database.

Product Development Intern   Jun. 2020 – Nov. 2020
Sirusti Technologies Singapore Pte Ltd   *Singapore, SG*
- Assisted the product development team in designing the student portal for IGCSE students to practice MCQ papers.
- Built an automated past paper uploading script in Python.

PROJECTS

CNN Stock Prediction/Trading Algorithm | *Python, TensorFlow, Keras*   Mar. 2024
- Built a Convolutional Neural Network using Python and **TensorFlow**, to predict the short-term behavior of any given stock with **71%** accuracy.
- Implemented data preprocessing techniques to clean and normalize stock market data for optimal and generalized model performance.
- Utilized convolutional layers to learn relevant features from historical stock price data automatically.
- Optimized model hyperparameters using **Keras** Hyperband Tuner to enhance prediction accuracy.
- Integrated the trained CNN model into a trading system for automated decision-making, conducting thorough backtesting to evaluate its effectiveness.

Stock Trader Bot Dashboard | *NextJS, Firebase, Tailwind CSS*   Dec. 2023
- Designed and developed a **NextJS** web app to visualize and monitor the performance of a Python trading bot.
- Integrated a **Firebase** Database to retrieve logs, order and position status, and modify trading parameters using a control panel.

Snake AI | *Python, Pytorch*   Jun. 2023
- Developed a reinforcement learning model using **Pytorch** that improves iteratively in the classic snake game.

ACTIVITIES AND LEADERSHIP

Co-President   Jun. 2024 – Present
Triton Engineering Student Council   *San Diego, CA*

TECHNICAL SKILLS

Languages   C, C++, ARM Assembly, System Verilog, Python, Java, Go, Javascript, Typescript, HTML/CSS, Bash, MATLAB
Software   React, NextJS, Node.js, Flask, JUnit, Material-UI, FastAPI, Tailwind CSS, Firebase, Unity
Dev Tools   Docker, Linux, Git, pandas, NumPy, Matplotlib, Pytorch, TensorFlow, Keras