Harsh Sundararaman

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EDUCATION

Texas A&M University, College Station, Texas — December 2026
Bachelor of Science in Electrical Engineering
Minor in Computer Science

WORK EXPERIENCE

Electrical Engineering Co-Op – Bridgestone Americas — June 2024 – Present
Intern

- Integrated **Gocator Sensors** with **PLCs** for provide rubber measurement, improving product quality control
- Deployed **ResNet deep learning model** using **PLC** encoder data for real-time jam detection, potentially saving thousands in prevented production disruptions
- Integrating **Balluff's laser sensors** and stack light system with **PLC** to guide operators in tire loading, preventing machine collisions

PROJECTS

Neuro-Drive - Autonomous RC Car — September 2024 - Present
Project Lead – Reveille Robotics

- Designing **self-driving RC car** using **NVIDIA Jetson Nano** for real-time processing and decision-making
- Integrating camera, **LiDAR**, and ultrasonic sensors for comprehensive environment perception
- Implementing **Frontier Based Planning Algorithm** for efficient path planning and obstacle avoidance

Robo-Cuber – Rubik's Cube Solving Robot — June 2024 – September 2024
Personal Project

- Engineered a **Rubik's Cube Solving Robot** using **OpenCV** for cube state input
- Developed **Teensy 4.1 firmware** for precise control of **A4988** stepper motor drivers
- Designed and implemented **electronics schematics**, breadboarded and **integrated** 3D printed components
- Developing **PCB** to replace complicated breadboarding

LEADERSHIP

Founder & President, Reveille Robotics | Texas A&M University

- Launched new robotics club focused on **autonomous systems** and **AI-robotics integration**
- **Leading** small, **dedicated team** of mechanical, electrical and computer engineers

TECHNICAL SKILLS

Software & Tools: Easy EDA & Altium, SolidWorks, Rockwell Automation Suite, Git, ROS

Programming Languages: C++, Python, Verilog, Ladder Logic

AI/ML: PyTorch, TensorFlow, OpenCV

Hardware: Microcontrollers, Sensors, Lab Equipment, NVIDIA Jetson Nano