

Anush Reddy Mudiganti

Pleasanton, CA • Foothill High School, Class of 2027 • GPA: 4.4 • SAT: 1450

EDUCATION

Foothill High School | Pleasanton, CA | Class of 2027

GPA: 4.4 | Honor Roll | California Scholarship Federation (CSF)

Current Courses:

AP Computer Science A - **5** • AP Calculus BC - **5** • AP U.S. History - **5** • AP Music Theory - **3** • Honors Principles of Engineering

Upcoming (2025–26):

AP Government • AP Macroeconomics • AP Physics C • AP Statistics • Multivariable Calculus • Honors Computer Integrated Manufacturing • Honors Aerospace Engineering

TECHNICAL SKILLS

Languages: Java, Python, C++, C#, JavaScript, TypeScript, HTML, CSS, Lua

Frameworks & Tools: React, Astro, Tailwind, Node.js, Supabase, Google Firebase, Git, WSL

Hardware: Custom PCB design, Raspberry Pi, 3D printer hardware, microcontrollers

PROJECTS & COMPETITIONS

NASA Space Apps Challenge

2025

- Built a website using NASA weather data to analyze and visualize atmospheric patterns across geographic regions.

Alameda County Science & Engineering Fair

2025

- Researched the connection between conducting gesture and the circle of fifths to help conductors assist ensemble sections in staying in tune.
- Won 3rd Place.

Pleasantondle - Daily Game

WIP

- Web game where players identify various landmarks and locations in Pleasanton. Build using Astro, Typescript, and Supabase utilizing Google's Embed API for street view.

3D Orbit Simulation with Procedural Planet Generation

WIP

- Real-time simulation with procedurally generated planets using multiple noise algorithms; built with C# in Unity.

Light-Painting Robot

2025

- Robot that takes image input and replicates it as long-exposure light photographs. Coded entirely in C++ with custom hardware. Repurposed 3D printer components to minimize cost.

Custom Retro NES Handheld

WIP

- Custom NES handheld built using a custom PCB, custom case designed in CAD and 3d-printed, a small 2 inch LCD screen, a headphone jack, and microsd card reader. Everything is powered by an ESP-32.

Custom Macroboard

2026

- Designed a custom PCB and using modified QMK firmware

Task App - Homework Tracker

WIP

- Full-stack web app to track homework assignments with custom authentication and Supabase backend.

Image-to-SVG / SVG-to-GCode Converter

2025

- Website that converts raster images to SVGs and SVGs to GCode for CNC/plotter use.

2D Orbit Simulation

2024

- Newtonian physics-based 2D orbital mechanics simulator written in C++.

Grocery Reminder App

WIP

- App that reminds users to buy groceries at a scheduled future time.

VOLUNTEERING

Student Volunteer, California Scholarship Federation (CSF) 2024 – Present | ~2 hrs/wk | ~144 hrs total

- Collected and donated items for nonprofit organizations through CSF fundraising drives.
- Created handmade cards for senior citizens and cancer patients.
- Distributed T-shirts to PPIE race participants.

Volunteer, Cycle of Hope — Habitat for Humanity 2024 – Present

- Race Day (7 hrs): Handed out bracelets and food/water to racers, assembled goody bags, set up aid stations along the course, and helped unload supplies.
- Pre-Race Setup (5 hrs): Registered participants, distributed race numbers and event information, assembled goody bags, and loaded supplies onto trucks at a local bike shop.

FINE ARTS

Piano 13+ Years

- Numerous state and national awards in competitive performance.
- Piano Guild: consistent Superior scores for 10+ years.
- MTAC State participant.
- AP Music Theory — formal study of theory alongside performance.

ADDITIONAL INFORMATION

Independent Study

- Self-studying foundational physics over summer 2026 to prepare for AP Physics C, having skipped the standard Physics course.