

Sergio Flores

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EDUCATION

University of Nevada, Reno | Reno, NV

Expected Graduation: May 2029

B.S in Mechanical Engineering, Minor in Mathematics

- TRIO STEM Scholar

Palo Verde High School | Las Vegas, NV

August 2021 - May 2025

Advanced Honors Diploma

- AP Scholar with Distinction Award (x2)
- PLTW Mechanical Engineering
- Weighted GPA: 4.7/4.95
- Robotics Team Leadership

PROJECTS

Thermal and Optical Tracking Device

May 2026 - Present

- Developed a device for real-time tracking of objects using a thermal infrared sensor array in conjunction with an optical imaging device. Driven by stepper motors with external magnetic rotary encoders for precision.
- Programmed predictive motion software in C++ and an HTML/CSS visual web interface utilizing an ESP32 microcontroller.
- Manufactured a custom 3D-printed motor housing and body using SolidWorks and Cura.

Aluminum Business Card Holder

June 2026 - July 2026

San Sebastián, Spain | Sponsored by Gene Haas and Tecnun Universidad de Navarra

- Manually programmed G-code on a Haas VF-2 CNC mill to machine a 6061-T6 aluminum part
- Executed edge-finder vise alignment, established work offsets and created soft-jaw fixturing
- Performed first-article inspection against engineering drawing tolerances

Remote Control Car

May 2023 - July 2023

- Designed and constructed a complete working RC vehicle from scratch with 3D-printed parts and low-cost materials (popsicle sticks).
- Engineered a gear reduction drivetrain with custom double herringbone gears
- Manufactured a servo steering system using a 3D-printed single-bar, two-joint linkage
- Created a fully working and 3D-printed open differential with functional bevel gears

WORK EXPERIENCE

Upward Bound Nevada | Reno, NV

Jan 2026 - Present

Program Assistant

- Created and taught educational workshops for 247 different first-generation students
- Instructed students across a variety of academic subjects
- Encouraged student accountability and motivation to complete homework and improve learning
- Built strong relationships with students to maintain engagement and support individual learning needs

SKILLS & CERTIFICATIONS

Technical Skills: *SolidWorks, Inventor, Fusion 360, Cura, Mastercam, Lightroom*

Programming Languages: *C++, Java, Lua, HTML/CSS*

Certifications: *Food Handler Card*