



DANIEL MORALES

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Education

University of Texas at El Paso

BS Mechanical Engineering, Minor in Biomedical Engineering: 3.62 GPA

Aug. 2024 – Ongoing

El Paso, Texas

El Paso Community College

AA Multidisciplinary Studies

Aug. 2020 – May 2024

El Paso, Texas

Ysleta High School

Engineering Endorsement Program / Early College High School Program

Aug. 2020 – May 2024

El Paso, Texas

Relevant Coursework

- Mechanics of Materials
- Differential Equations
- Mechanics II -Dynamics
- Intro to Thermo-fluids
- Design Fundamentals
- Intro Computer Science

Projects

Vex Robotics

Aug.2021-Feb.2024

- Designed and assembled modular robot components using Fusion 360
- Contributed to iterative design improvements for competition performance

Greenhouse Project | *Project Manager*

Aug.2023-May.2024

- Led 5-member team to maintain a solar-powered irrigation system
- Coordinated scheduling, task delegation, and system implementation
- Improved plant growth efficiency through automated watering schedules

Bell Advanced Vertical Robotics | *Programmer and Assembly Assistant*

Aug.2022-December.2022

- Calibrated and programmed a quadcopter drone for flight, visual output, and laser output based on computer input
- Applied CAD models and 3D printing to produce functional drone components

Poke-miner RPG | *Individual Project*

March.2025-April.2025

- Designed and developed a Java-based RPG using object-oriented programming principles
- Implemented arrays of objects, constructors, and class-based game logic
- Built interactive gameplay involving character progression and battles

Stress-Strain Plotter/Material Behavior | *Individual Project*

Jan.2026-Feb.2026

- Developed a Python program to compute stress-strain relationships from raw data and generate plots using matplotlib
- Implemented data processing using arrays and object-oriented design
- Estimated material behavior based on stress-strain characteristics

Technical Skills

- **Software:** Fusion 360, SolidWorks, Python, Java, MATLAB
- **Engineering:** CAD Modeling, Rapid Prototyping, Basic Programming, 3D Printing

Extracurriculars

Robotics

Aug 2021– May 2024

Vice President

Ysleta High School

- Mentored new robotics team members in CAD design and assembly, ensuring continuity
- Built 3 competition Frobots, including 1 that placed top 5 at State Qualifier

National Honor Society

Jan 2022– May 2024

Member

Ysleta High School

- Contributed to multiple projects in our local community
- Brought input from local community to publicly owned park