Ricardo Mejia

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Education

Texas A&M University – Bachelor of Science in Mechatronics Engineering   *Dec 2026*
Regents' Scholar | First Generation Student

Experience

Manufacturing Engineering Intern
Howmet Aerospace - Del Rio, Tx / Acuña, Mexico   *May 2025 – August 2025*
- Improved operational efficiency by analyzing workflows and rework processes.
- Applied Lean Six Sigma tools (5 Whys, A3 problem solving, one-piece flow) to drive process improvements.
- Developed and implemented a real-time rework tracking tool to monitor defect trends and support data-driven decisions.

Leasing Agent (Community Assistant)
University Square Apartments, Asset living - College Station Tx   *December 2023 – May 2025*
- Facilitated apartment leasing by conducting tours, processing rental applications, and managing lease agreements.
- Addressed resident inquiries and concerns, ensuring a smooth and satisfactory living experience.

Car Salesman/Consultant
Ford Cecil Attkisson - Del Rio, TX   *June 2022 – August 2022*
- Assisted customers in selecting the ideal vehicle by providing detailed information on features and benefits.
- Exceeded sales targets through effective negotiation and customer service.

Projects

SmartGlow – IoT Smart Lighting System
Developer   *April 2025 – May 2025*
- Developed an STM32F401RE-based system with IR sensors and servo motor for automated light control.
- Integrated with a Raspberry Pi web interface via UART to enable IoT control, scheduling, and remote access.
- Added PWM-based dimming and motion-activated automation to enhance energy efficiency.

Kick-It Car – Capacitor-Powered Vehicle
Project Designer/Simulator   *April 2025 – May 2025*
- Designed and built a 3D-printed car powered by a capacitor system using gears, inductors, and magnets.
- Modeled energy regeneration and propulsion dynamics in Simulink, analyzing kinetic-to-electrical energy conversion.
- Demonstrated principles of energy storage, mechanical-to-electrical conversion, and system optimization.

Personal Portfolio Website
Web Developer   *January 2024*
- Built a responsive portfolio website using HTML, CSS, and JavaScript.
- Implemented a clean, mobile-friendly interface for showcasing projects.

Additional Projects

- Liquid Level Controller (2025): Assembled transistor-based controller; authored 6-page technical report.
- Sack_O_Games (2022): Python-based game package with UI and modular logic.
- Expandlet (2022): CAD & 3D printing prototypes using Fusion 360.
- FRC Robotics Team 4063 (2018–2022): Designed and programmed robot for state, district, and world competitions.

Skills

Programming/Embedded: Python, C, JavaScript, STM32, Arduino, Raspberry Pi

Software/Tools: Fusion 360, Autodesk Inventor, Multisim, Excel, Database Management

Fabrication & Testing: 3D Printing, Laser Cutting, CAD Modeling, Mill/Drill Machines, Oscilloscopes, Circuit Analysis

Languages: English (fluent), Spanish (fluent)

Certifications: Database, Excel, HTML (MyEducator 2024), Simulink Fundamentals (MATLAB 2025)

Organization: SHPE Member, PBE Officer