JUAN RAMIREZ

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PROFESSIONAL SUMMARY

Mechanical Engineering graduate from Florida International University, Magna Cum Laude, with hands-on experience in mechanical design, engineering calculations, technical documentation, prototyping, testing, and component inspection. Strong analytical and problem-solving skills with experience developing and evaluating mechanical systems from design through physical testing. Interested in applying my engineering foundation to fire protection, life safety, building systems, and code-compliant design while continuing to grow under experienced engineers.

EDUCATION

BACHELOR OF SCIENCE: MECHANICAL ENGINEERING 04/2026
Florida International University, Miami, FL
Magna Cum Laude | GPA: 3.73/4.00 | Dean's List, 2023-2026
Relevant Coursework: Fluid Mechanics, Thermodynamics, Heat Transfer, Mechanical Design, Materials

TECHNICAL SKILLS

- **Engineering:** Mechanical Design, Engineering Calculations, Fluid Mechanics, Thermodynamics, Heat Transfer, Material Selection, Structural & Vibration Analysis
- **CAD & Documentation:** SolidWorks, 3D CAD Modeling, Engineering Drawings, Technical Documentation, Microsoft Office
- **Testing & Analysis:** Prototyping, System Testing, Performance Evaluation, Root-Cause Troubleshooting, Data Analysis
- **Inspection & Quality:** Component Inspection, Traceability, Documentation Review, Process Improvement
- **Languages:** English (Bilingual), Spanish (Native/Bilingual)

ENGINEERING PROJECTS

Beach-Cleaning Microplastic Filtration System - Senior Design

- Designed and integrated a mechanical filtration subsystem using SolidWorks, including a vibrating mesh, motor mount, collection tray, and spring-isolation system.
- Progressed the system from concept and 3D CAD through prototype fabrication, aluminum construction, assembly, and verification testing.
- Performed engineering calculations and evaluated structural, vibration, material, and performance requirements against an 80% capture-efficiency target.
- Documented test results, identified performance gaps, and supported iterative design changes to improve system behavior.

Four-Sensor Vehicle Proximity Warning System:

- Designed, assembled, programmed, and tested an Arduino-based system integrating four ultrasonic sensors, digital I/O, LEDs, and buzzer alerts.
- Diagnosed sensor behavior, refined control logic, and verified system response through repeated functional testing.

PROFESSIONAL EXPERIENCE

IAG MATERIALS

Medley, Florida

Shipping & Receiving Specialist 05/2023 to 01/2025

- Inspected aviation components and supporting documentation, verifying part and serial numbers, condition, identification, and records before inventory entry.
- Maintained accurate component records in Quantum ERP to support traceability and configuration accuracy.
- Investigated and resolved discrepancies involving incorrect identifiers, misclassified components, naming errors, and missing documentation.
- Coordinated corrective action and maintained organized technical records across aviation component workflows.