Luis Ronquillo Hernandez

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Mechanical Engineering Student | R&D Engineering Intern | CAD, FEA & Manufacturing | Seeking Summer 2027 Internship

EDUCATION

Bachelor of Science, Mechanical Engineering *Expected May 2029*

Rose-Hulman Institute of Technology – Terre Haute, IN

Relevant Coursework (through Sophomore Year): Multivariable Calculus & Differential Equations I & II, Engineering Statistics I, Numerical Methods, Conservation & Accounting Principles, Mechanical Systems, Electrical Systems, Mechatronic Systems, Applications of Thermodynamics, Statics & Mechanics of Materials

AP Foundations: AP Physics C: E&M, AP Physics 1, AP Calculus (Springboro High School, May 2025)

SKILLS

CAD/CAM: SolidWorks, Solid Edge, reverse engineering, 2D technical drawings & GD&T, FEA / stress analysis

Fabrication & Testing: CNC machining, manual lathe & mill operation, bench work, sheet metal design, 3D printing & rapid prototyping, lab reporting, basic circuit knowledge

Programming & Analysis: MATLAB, Python, data analysis, Google Workspace, Microsoft Office

Language: Spanish – Fluent (Reading, Writing, Speaking, Listening)

INTERNSHIP EXPERIENCE

ProAmpac – R&D Engineering Intern *Jun 2026 – Aug 2026 (12 weeks)*

- Modeled and reverse-engineered over 1,800 custom packaging components from physical samples into accurate SolidWorks/Solid Edge models to support design iteration and manufacturability reviews
- Designed and fabricated sheet metal fixtures and tooling used to support R&D testing and prototyping workflows
- Programmed and operated CNC machining processes to produce functional prototype parts for engineering evaluation
- Used 3D printing for rapid prototyping to validate design concepts before committing to production-intent fabrication
- Collaborated with R&D engineers and cross-functional team members to translate design concepts into working prototypes, then presented project outcomes in a formal end-of-internship review

Full project breakdowns, CAD renders, and additional metrics available at lronquillo.com

PROJECT EXPERIENCE

Multi-component Mechanical Design and 3D Modeling *Sep 2025 – Nov 2025*

- Created, modified, and optimized mechanical components using SolidWorks
- Designed multi-part assemblies using mates and constraints to ensure proper fit and function
- Produced professional 2D technical drawings with accurate dimensions and annotations
- Performed basic stress analysis (FEA) to evaluate structural integrity and design performance

Restroom Accessibility and Design Research *Aug 2024 – May 2025*

- Conducted human-centered engineering research focused on accessibility, usability, and social equity
- Collected and analyzed survey data to inform design recommendations using human factors principles
- Proposed engineering improvements incorporating ergonomics, public health, and accessibility standards
- Collaborated with faculty and external PhD researchers for feedback on methodology and conclusions

Rose Grand Prix Engineering (GPE) – Chassis Team *Fall 2025 – Present*

- Contributing member of a student team designing, building, and testing a small open-wheeled Formula-style race car from scratch each year under competition constraints for rules, safety, budget, and timeline
- Helped design and fabricate the vehicle chassis, translating design requirements and packaging constraints into a manufacturable structure
- Applied manual lathe, mill, and precision bench work techniques learned through hands-on machining coursework to produce chassis components

WORK & VOLUNTEER EXPERIENCE

South Regency Tennis Center – Receptionist *Jul 2024 – Oct 2024*

- Managed guest check-in, court/class scheduling, and customer flow in a fast-paced environment, maintaining safety and facility standards

5 Panes 2 Peces – Volunteer *Jan 2021 – Aug 2025*

- Prepared and distributed meals to homeless populations; sorted and organized clothing donations for efficient community distribution

ACTIVITIES & INTERESTS

Activities: Society of Hispanic Professional Engineers (SHPE) • Rose Grand Prix Engineering (GPE) • MakerLab / 3D Printing Club • Pickleball Club • Tennis Club

Interests: Competitive Tennis, Pickleball, Distance Running, Environmental Sustainability, Multicultural Awareness