

# Anthony Pimentel-Legaspi

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## EDUCATION

### California State University Long Beach

Bachelor of Science (B.S.) in Mechanical Engineering

Long Beach, CA

December 2024

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## PROJECTS

### Morphing Wing UAV

Senior Design Capstone

Long Beach, CA

January 2024 - December 2024

- Designed and simulated a morphing UAV wing with 15° camber deflection using SolidWorks; improved L/D ratio to 12.38 in optimal configuration
- Conducted finite element and CFD analysis to validate aerodynamic performance,
- Developed a dual-material wing using FDM 3D printing (PLA + TPU), printing each 50 mm rib-spaced section in under 24 hours
- Managed bill of materials, design iterations, simulation testing, and final prototype integration within academic project deadlines

### Formula Race Design Proposal

Senior Project

Long Beach, CA

August 2024 - December 2024

- Developed a comprehensive Request for Information (RFI) and Request for Proposal (RFP) to solicit and evaluate prospective suppliers and manufacturing partners for key Formula 1 vehicle components.
- Authored the technical proposal, including project scheduling via Gantt charts, critical phase deadlines, and milestone assessments for tracking progress against performance, budget, and schedule.
- Produced a detailed cost proposal, estimating total project costs through itemized labor, material sourcing, manufacturing hours, and tooling expenses, alongside calculated wages based on CAD modeling, FEA analysis, and fabrication tasks.

### Power Plant Design

Solar Thermal

Long Beach, CA

August 2023 - December 2023

- Designed a 50 MW solar thermal power plant to serve as a clean, renewable energy source
  - Conducted thermodynamic cycle analysis using Rankine cycle principles
  - Performed financial modeling with projected \$50.4M/year revenue and simple payback in 5 years; accounted for land, equipment, and construction costs
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## WORK EXPERIENCE

### Nordstrom

Delivery Associate/ Logistics Processor

San Diego, CA

May 2025 - Present

- Inspected and quality-checked over 200 items daily to ensure all merchandise consistently met company quality standards and customer expectations.
- Documented and verified shipments of high-value designer items and hazmat packages, ensuring accurate records and compliance with safety and handling regulations during fulfillment and delivery operations.

### Nike

Part-Time Store Associate ("Athlete")

Long Beach, CA

August 2022 - November 2024

- Analyzed and addressed customer needs by recommending effective products, restocked and showcased new merchandise, and built customer loyalty through accurate product knowledge and personable interactions
  - Guided customers through high-volume retail environments by actively listening to fitness goals and offering tailored product recommendations, resolving confusion around performance gear.
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## SKILLS

**Technical Skills:** Mechanical Design & Analysis, 3D CAD, Additive Manufacturing, 3D Printing, Power Plant Design, Thermodynamics, Thermal & Structural Analysis, Machining (Mill/ Lathe), Technical Documentation, GD&T, Microsoft Office Suite (Excel & Word), Computational Fluid Dynamics, Finite Element Analysis, Fluid Dynamics

**Soft Skills:** Written & Verbal Communication, Effective Communication, Attention to Detail, Team Player, Adaptability, Time Management

**Softwares:** SolidWorks, MATLAB, AutoCAD, ANSYS