Luis Barcenas

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Location:MI
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Projects: https://luisbarcenas321.github.io/

EDUCATION

University of Michigan, Ann Arbor, MI
Bachelor of Science in Engineering May, 2026

EXPERIENCE

University of Michigan Architecture, Engineering and Construction, Ann Arbor, MI
Plant Engineering Intern May 2024 - Jan 2025

- Coordinated with engineers to improve chilled water repair and maintenance processes to design 50+ comprehensive metering drawings.
- Conducted 10+ field surveys to identify and mark areas of interest for fire safety, including the precise location and status of fire dampers, enhancing overall safety compliance and system effectiveness.

Projects

Design and Manufacturing Class II, Ann Arbor, MI Jan 2024 - May 2024

- Engineered a custom 4-bar linkage mechanism to meet specific motion requirements, optimizing for both weight and cost efficiency.
- Created 12 detailed manufacturing documents and engineering drawings, as well as a bill of materials and an electrical wiring schematic.
- Tuned and calibrated a PID control system for zero overshoot, zero oscillations and quick response time as well as performing friction voltage (stall voltage) tests to ensure smooth operation.

Design and Manufacturing Class III, Ann Arbor, MI Jan 2025 - May 2025

- Collaborated on the conceptual design of a robust and reliable door system for crewed lunar landers to support human and cargo ingress/egress with 10 different brainstormed ideas.
- Developed CAD using inspiration from existing gooseneck hinges to design a custom hinge for our lunar lander door allowing for 180 degrees of rotation.
- Prepared 3 design reviews to document progress, analyses and recommendations. Ensuring alignment with project objectives and stakeholder needs.

SKILLS

Manufacturing: 3D printing, lathe, mill
Modeling: MATLAB, SolidWorks, AutoCAD, Microstation
Organization: Technical reports, manufacturing plans, bill of materials