

# Brandon Feraud-Solorzano

[www.linkedin.com/in/brandon-feraud-solorzano](http://www.linkedin.com/in/brandon-feraud-solorzano)

bf282@cornell.edu | Miami, FL

Mechanical Engineer with prototyping and product design experience, seeking to contribute to innovative engineering teams while leveraging AI tools to improve design efficiency and productivity.

## EDUCATION

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**Cornell University**, College of Engineering, Ithaca, NY

M.Eng. Mechanical Engineering | B.S. Mechanical Engineering | Current GPA: 3.6/4.0

**Relevant Courses:** Multidisciplinary Design Optimization, Innovative Product Design, Mechanical Synthesis, System Dynamics, Mechatronics, Entrepreneurship for Scientists and Engineers, AI Reasoning & Decision-Making, Internet of Things, Object-Oriented Programming and Data Structures, Digital Business Strategy, Strategic Management

## WORK EXPERIENCE

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**AI Data Trainer**, *Data Annotation*, Remote

**Dec. 2023- Present**

- Annotated and verified AI-generated code, ensuring accuracy and consistency in all response attributes to aid model development.
- Applied prompt engineering techniques to generate and compare AI responses, ensuring response alignment across various axes such as safety and accuracy.

**EHS and Continuous Improvement Intern**, *ITT Enidine*, Buffalo, NY

**May 2023-Aug. 2023**

- Led 16 Risk Assessment meetings using an FMEA process to determine risk hazards in our manufacturing workflows and implement safety improvements for workers.
- Implemented an algorithm to calculate risk priority numbers based on process frequency, safety controls, and injury severity for 194 different actions in the manufacturing floor.
- Reduced part-changeover time by 50% in part-machining workflows by leveraging lean six sigma principles.

**Landing Gear Lead/Advisor**, *Cornell University Design Build Fly*, Ithaca, NY

**Oct. 2021-May 2024**

- Designed and optimized landing gear for our radio-controlled airplane using an iterative, rapid prototyping approach for the International AIAA Design Build Fly competition.
- Experimented with composite material manufacturing methods to enhance overall airplane durability.
- Increased efficiency of standard operating procedures (SOP) for future competition cycles by updating and collaborating with leads to implement workflow changes.

## PROJECTS

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**Text-to-CAD**

- Developing a commercially viable framework that brings AI-driven design assistance directly to CAD designers.
- Establishing a workflow to reduce model hallucinations and to generate executable design scripts.

**Plant Monitoring Enclosure: Internet of Things**

- Managed a team of 4 to design and prototype a plant enclosure with 6 integrated sensors to monitor plant activity
- Developed C++ application to send live sensor data to a website where plant activity can be monitored.

**Clippy: A Lecture Desk Surface Extender**

- Spearheaded a group of 8 through ethnographic research, prototyping, and manufacturing analysis of a lecture desk extender; Placed 1st out of 8 teams in the final showcase.

## SKILLS, HONORS, AND AWARDS

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**Mechanical Design and Prototyping:** SolidWorks, Fusion360, 3D-printing, laser-cutting, rapid prototyping, experimental setups, benchmarking

**Simulation and Analysis:** ANSYS Mechanical, ANSYS Fluent, MATLAB

**Engineering Tools & Emerging Technologies:** Excel, Python (automation and analysis), C++, Java, CADQuery API, AI-assisted CAD workflows (OpenAI API, prompt engineering), workflow automation, data-driven design optimization

**Soft Skills:** Leadership, Communication, Quick Learning, Independent, Resilient, Detail-Oriented

**Honors:** Robert L. Ryan Scholar, NACME Scholar, Hispanic Scholarship Fund Scholar (HSF)