

Brandon Feraud-Solorzano

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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

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

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

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

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)