Bruna O. Rocha

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EDUCATION

Bachelor of Science in Engineering - Mechanical Engineering
University of Michigan • Dearborn, Mi • Expected Graduation: December 2025

ACADEMIC INVOLVEMENT & ACCOMPLISHMENTS

Jul 2022 - Present|Michigan Aeronautical Science Association |Mechanica Lead |Dearborn
 • Conducted thorough Design for Manufacturability (DFM) and Design for Assembly (DFA) analysis, implementing principles to streamline production processes and enhance overall project efficiency
 • Guided a team of **forty** engineers in conducting thorough airbrake testing using the wind tunnel and CFD analysis. Improved air drag accuracy and evaluated the impact on the rocket during flight, resulting in an impressive 15% enhancement in target apogee
 • Collaborated with cross-functional teams to develop and optimize a high-performance flight computer, enhanced data processing capabilities, attaining real-time monitoring with a 35% reduction in system latency

Apr 2023 - Present|Society of Women Engineers |Social Coordinator |Dearborn
• Foster the creation of a welcoming and inclusive environment within the organization by championing diversity and fostering camaraderie through social initiatives
• Represented SWE at the national WE2023 conference, fostering connections and bringing back valuable insights for our members
• Organized a collaborative outreach event with 50 Girl Scouts in partnership with **Blue Origin** to promote and support girls in STEM

WORK EXPERIENCE

Feb 2022 - Apr 2022 | Tropik |Mechanical Engineering Intern |Sao Paulo
Efficiently progressed from a mechanical engineering intern at Tropik to assume a dedicated role in packaging design, highlighting proficiency in various aspects, including:
• Coordinated seamlessly with cross-functional teams, employed principles of Design for Environment (DfE) and Life Cycle Assessment (LCA) to ensure the selection of environmentally responsible materials, and developed packaging with minimal ecological impact
• Used CATIA V5 for intricate packaging design and cost-effective prototyping
• Worked closely with the marketing team to translate customer insights into technical requirements

Jul 2022 - Present | University of Michigan |Research Assistant |Dearborn
As a research student in Dr. Liu's lab, I am having the unique opportunity to explore the complexities of cognitive neuroscience, gaining hands-on experience in data segmentation and analysis
• Developed MATLAB code for the Accuracy Initiative, improving data segmentation for Independent Component Analysis. Markedly enhanced stimulus identification, boosting analysis efficiency, and reducing errors by 15%.
• Enhanced the EEG guidebook for prospective student researchers by incorporating additional technical details and insights

SKILLS

SolidWorks | AutoDesk | Fusion 360 | Catia V5 | OpenRocket | CFD |Microsoft Office | MATLAB | Python| EEGLAB |3D printing | Laser Cutting |DFMEA Analysis |DFM/DFA principles |Team Management| Leadership| Product Development | Analysis| Environmental Sustainability| Cost-Effective Solutions| Project Efficiency| Inclusivity

CERTIFICATIONS

Sleep: Neurobiology, Medicine & Society	University of Michigan	**Oct 2021**
Crash Course with Python	Google	**Jul 2021**
Programming for Everybody	University of Michigan	**Jul 2021**

AWARDS

International Student Scholarship	University of Michigan	**Dec 2022 - Dec 2025**
Face of Tech Scholarship	Harman International	**Jan 2023**
Leadership Award	University of Michigan	**Mar 2023**
Dr. Gil Moore Award for Innovation	Spaceport America Cup	**Jul 2022**