

Julian D. Osorio

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SYNOPSIS

Mechanical Engineering student at Brown University with aerospace and biotechnology project experience. Skilled in MATLAB, SolidWorks, and data visualization with hands-on experience in simulations, coding, and prototyping.

EDUCATION

Brown University, Mechanical Engineering Sc.B Providence, RI | **Expected Graduation: May 2028**
3.7 GPA, Industry Relevant Courses: Electricity and Magnetism, Materials Science, Statics and Dynamics, Applied ODEs

SKILLS

Software: SOLIDWORKS, MATLAB (Simulink & Onramp), Javascript, Python, Arduino

Language: Fluent Proficiency in English and Spanish. Elementary proficiency in French

PROJECTS

Simulating 2D Airflow over a Standard Airfoil, Python Providence, RI | May 2025 - Ongoing

- Simulating 2D airflow over standard airfoils in Python, analyzing lift and drag data enabling comparison of aerodynamic efficiency to guide wing design choices.

Real-time Data Visualization App, Sensor Dashboard, Python Tampa, Florida | June 2025

- Built a Python-based dashboard with Pandas enabling live visualization of 10,000+ sensor readings (temperature, humidity, air pressure, light) with <1s refresh rates
- Source code and demo available on portfolio.

Spring-Mass Launcher Project, MATLAB Providence, Rhode Island | April 2025

- For the final project in Statics and Vibrations course at Brown University, students were tasked with using MATLAB's ODE45 solver to create a program that returned the ideal spring-mass formation to use from a given table with the masses, stiffness, and dimensions of available springs and masses.
- Became familiar with essential MATLAB functions such as ODE45 and OPTIMIZER to create a functional program where the percent error reached a max of 0.85%, signifying a 99% success rate and high quality results during testing.

PROFESSIONAL EXPERIENCE

Teaching Assistant, ENGN 0030: Introduction to Engineering Brown University | August 2025 – Ongoing

- Newly created at Brown University, ENGN 0030 began its second year taking on over 250 students that sought an introduction to the engineering field.
- Met weekly with professors and course developers to review class material, brainstorm teaching methods, and plan conferences.
- Taught 50+ students foundational concepts in MATLAB and SOLIDWORKS in weekly conferences.

APPRENTICESHIPS/FELLOWSHIPS

Fellow, Tampa International Airport Fellowship Program Tampa | July 2025

- Spent one week previewing various fields of airport operations at Tampa International Airport as a fellow.
- Experiences included airport security, terminal management, and aircraft maintenance.
- Gave a 20 minute presentation on the final day centered around information gathered from the experience including repair and operations on Cessna aircrafts that allowed for networking with Tampa Bay officials.

Medical Apprenticeship, DeLEX Hackensack, New Jersey | June 2023

- Shadowed Dr. Jaffar Raza, a cardiologist at Hackensack University Medical Center, and his operations for one week.
- Attended parent consultations, brainstormed emergency procedures for irregular outcomes, and networked with biotech representatives as an introduction to biomedical engineering.

Executive Mentorship Program, DeLEX Virtual | July 2023

- Spent 3 days shadowing Chief Operating Officer of CyberMed Corporation, Ms. Malak Atut-Raza
- Developed various management principles and practices from facilitating and shadowing her meetings and day-to-day operations at this medical consulting group.