SEBASTIAN LOBATON

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EDUCATION

University of Central Florida   **Expected Graduation: May 2028**
Bachelor of Science in Aerospace Engineering

EXPERIENCE

Tech Revolution STEM | Miami, Florida   **July 2025 - August 2025**
Technical intern

- Managed classrooms of 20 students, providing instruction in **Python** programming, engineering fundamentals, and robotics principles.
- Guided students through coding challenges and robotic system builds, ensuring each gained measurable proficiency in both Python syntax and robotics design concepts.
- Designed and delivered interactive, project-based lessons fast-paced learning environment.

Competition Robotics | Davie, Florida   **August 2020 - May 2024**
Lead builder, Strategist

- Led the design, prototyping, and construction of competition robots, integrating pneumatic actuators, high-speed flywheels, and precision gear trains
- ·Optimized drivetrain efficiency through iterative testing, achieving a 22% increase in acceleration and a 15% improvement in turning radius; innovated a ball launcher that increased accuracy by 35% and extended range by 2.5 meters.
- Led team to 13 regional victories, two state championship, and earned 2nd place at the VEX Robotics World Championship.

PROJECTS / EXTRA-CURRICULAR

UCF AIAA   **August 2025 - Present**
Aviation design lead

- Collaborated with RC aircraft design team of 6 to create a finished RC aircraft design and build process
- Improved top-speed drag by 15%, enhancing aerodynamic efficiency by designing 20+ airfoils and conducting simulation in **XFLR5**
- Utilized **SolidWorks** to design and assemble fuselage, tail, and wing components
- Presented final design as team lead, securing funding by demonstrating performance results

Autonomous Model Rocket   **January 2025 - August 2025**
Personal Project

- Designed and engineered a self-correcting model rocket with integrated GPS and gyroscopic guidance systems for stability.
- Conducted design tests and collected data to refine aerodynamics, achieving a 23% improvement in overall performance.
- Used AutoCAD to fabricate custom fins, nose cone, and parachute compartments, ensuring both functionality and durability.

Autonomous Boat   **January 2025 - April 2025**
Group Project

- Designed and built an autonomous boat from scratch, integrating CAD modeling and system implementation.
- Fabricated structural components with 3D printing and traditional machining, optimizing efficiency
- Built and tested the boat's hull and control systems, iterating designs to improve durability and performance

UCF SHPE   **August 2025 - Present**

- Selected for the MentorSHPE program, receiving one-on-one guidance from a mentor with NASA and Space Concordia experience, developing skills in technical communication and professional development
- Contributed to aerospace projects such as ion propulsion research and rocket design/build activities, applied AUtoCAD and simulation tools to improve rocket flight efficiency by 15%.
- Attended the 2024 SHPE National Conference, participating in technical workshops and networking sessions with aerospace professionals and recruiters.

SKILLS

Technical: 3D Printing, Soldering ,CNC Machines, Drill press, Laser Cutting, Sensor integration, LSSYB certification
Software: AutoCad, Python, C, VSCode, Microsoft Office Suite, OpenRocket,
Languages: English, Spanish