

EMILIANO RODRIGUEZ

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MECHANICAL & SOFTWARE ENGINEER

Mechanical engineer with 4 years of experience building data intensive applications. Tackling challenging architectural and scalability problems in finance, aerospace simulations, and data science including real time data streaming applications.

EDUCATION

UNIVERSITY OF TEXAS AT SAN ANTONIO [FALL 2016-SPRING 2019] San Antonio, TX

- Major: Mechanical Engineering || Minor: Computer Science || GPA: 3.52

EXPERIENCE

ANYAR INC. [JUNE 2023-PRESENT] Pensacola, FL

Aerospace Simulation Engineer & Data Scientist

- Developing software models of aerospace systems with applications to air/space-based weapons systems.
- Modeling weapon systems, subsystems, and their operating environments using software languages such as C++, Python, and JSON.
- Solving ordinary or partial differential equations using numerical methods or software packages/libraries.

USAA [JUNE 2019-JUNE 2023] San Antonio, TX

Data Engineer

- Bank Data and Analytics - Risk Decision Engine Team. Batch and streaming data applications using python, Apache NiFi, Docker, Hadoop HDFS.
- Control-m scheduling and automation.
- Constructed a python data control framework for big data.
- Data stage, Snowflake, DBT, NiFi, ETL development.

BROBOTICS INC. [AUGUST 2018-JUNE 2019] San Antonio, TX

Lead Software Developer

Capstone Project - Constructed an inexpensive, open-source quadrupedal robot 3D printed intended for research use in the Robotics and Motion Laboratory at UTSA.

- Equipped with a Raspberry Pi and O-drive motor controllers.
- Robot Operating System (ROS) - physics simulation engine utilized to implement commonly used functionality.
- Python built software architecture.
- Specifications include a speed of 0.2 m/s, payload capacity of 25% of weight, and weighing less than 23 kg.

ROBOTICS AND MOTION LABORATORY [SPRING 2018-JUNE 2019] SAN ANTONIO, TX

Research Assistant

Open Platform Humanoid Project - Darwin-OP2 a bipedal robot intended to research agile locomotion and increase dynamic stabilization.

- Refactored software architecture refactored for simplistic development.
- Demonstrated locomotion capabilities.
- Instigated outreach to students and researchers interested in robotics

MOST PROUD OF

- ADVANCED ROBOTICS [senior(UTSA)] – Arduino/Raspberry Pi Instructor. Teaching university students the basics of working with micro controllers, LCD, motors, LED's, and various sensors.
- AERONAUTICS & ROCKETRY CLUB [junior(UTSA)] – Vice President, Avionics/Recovery lead. Engineering rockets, working with body design, force analysis, hybrid motors. Sub projects; wireless launch controller.
- Fluent in English and Spanish, private pilot certified, open water certified, K-16th robotics instructor.