Emiliano Rodriguez

emirodi.py@gmail.com || https://profound-dusk-f6ef32.netlify.app/ || Fort Walton Beach, Fl

MECHANICAL & SOFTWARE ENGINEER

Mechanical engineer with 5 years of experience building data intensive applications. Tackling challenging architectural and scalability problems in finance, aerospace, 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] — Fort Walton Beach, Fl

Staff Engineer [Granted Secret Security Clearance]

- Project Manager and Technical Lead - designed a scalable big data architecture, ETL factory, web application and API integration with Scality's object storage backend intended for AFRL's digital material management program for scientific research data.
- Coordinating diverse data requirements and management across multiple teams involved in the consumption, upload, retrieval, and processing of big data pipelines.
- Utilized agile methodologies to adapt to changing project requirements and deliverables via monthly sprint review meetings, ensuring effective communication and collaboration among cross-functional teams.

Machine Learning Engineer

- Developing mesh graph neural networks (MGNNs) for mass spring systems in a simulation environment.
- End to end training and simulation frameworks including modifying data structures and expansion of the physics engine models.

USAA [June 2019-June 2023] — San Antonio, TX

Data Engineer [Software Compliant Company]

- Bank Data and Analytics - Risk Decision Engine Team. Batch and streaming data applications using python, Apache Kafka, NiFi, Docker, Hadoop HDFS, Hive, Data stage, SnowFlake, DBT.
- Control-m scheduling and data workflow automation.
- Developed a python data control framework for big data integrity and consolidation.

Brobotics Inc. [August 2018-June 2019] — San Antonio, TX

Lead Software Developer

- Capstone Project - an inexpensive, open-source 3D printed quadrupedal robot intended for academic research use in the Robotics and Motion Laboratory at UTSA.
- Equipped with a Raspberry Pi and O-drive motor controllers with python built software architecture.
- Robot Operating System (ROS) - physics simulation engine utilized to test and implement functionality.

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 for simplistic research development and locomotion capabilities.
- Instigated outreach and demos to students and researchers interested in robotics across the San Antonio area.

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.