EIDEN O. GARCIA TORRES

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EDUCATION

Bachelor of Science in Electrical Engineering, BSEE Graduation Date: Dec 2024
University of Puerto Rico, Mayagüez GPA: 3.35/4.00

- Concentration: Power and Systems Engineering
- Minors: Construction Engineering and Architecture, Project Management & Professional Ethics

PROFESSIONAL EXPERIENCE

JR Technical Specialist, Engineering & Asset Management Jan 2023 - Present
LUMA Energy LLC, San Sebastian, PR

- Assess **construction feasibility** at different phases of the DA project across **40+** distribution feeders in P.R. impacting around **40,000+** customers.
- Conducted **preliminary protection analysis** for fuses, three-phase, and single-phase reclosers on **10+** feeders using Synergi Electric and Excel.
- Performed **load studies** for feeders across the island, supporting protection analysis and feasibility assessments.
- Managed configuration, maintenance, and data acquisition for **20+** S&C devices, including IntelliRupters and TripSavers.
- Developed **4+** guidelines for departmental processes, including data acquisition and load study procedures.
- Created PowerBI dashboards and trackers for **400+** IntelliRupters, GridShields, and TripSavers maintenance and data acquisition.
- Used Power BI, Excel, and Python to integrate the CMI Avoidance metric, reducing CMI by **~10%** through three-phase recloser data analysis.
- Tracked damage assessment during Tropical Storm Ernesto, identifying **over 500** damage points in the Mayagüez region using Excel and ERT.

Internship & Co-op, Engineering & Asset Management May 2022 – Jan 2023
LUMA Energy LLC, Santurce, PR

- Verify and assess **feasibility** of fuses placements for **over 15** distribution feeders, utilizing GIS and Excel for reporting.
- Configured IntelliRupters (S&C and ABB) and in field visits for maintenance and commissioning of **5+** S&C units.
- Reviewed **over 6** feeder recommendations reports using tools like Synergi and GIS, ensuring accuracy and completeness of devices location.
- Conducted **comprehensive analyzed** of interruption metrics and feeder performance, contributing to the integration of the CEMI Metric.
- Programmed ammeters for feeder installations, organized collected data, and performed detailed analyses to generate operational insights.

ACADEMIC EXPERIENCE

Battery Division Leader - Solar Engineering Research Racing Team Aug 2021 – Jul 2022
University of Puerto Rico, Mayagüez Mayagüez, PR

- Led a team of **3,** optimizing Battery Management System (BMS) parameters, conducting comprehensive battery module testing, and ensuring safety compliance, which enhanced energy efficiency and operational reliability in the solar racing project using tools such as Excel.
- Managed 3D modeling and manufacturing of battery components, led technical workshops, and delivered progress reports, contributing to the development of a high-performance solar vehicle tools such as Shapr3D.

Undergraduate Student Researcher - Remote Tandem Robots (RETRO) Jun 2021 – Jul 2021
Georgia State University Georgia, US

- Conducted research in the NSF program, focusing on logistics for a robotic vehicle, optimizing mobility, observation range, and sensor integration.
- Collaborated with a team to enhance robotic functionality, improving performance and mission success.

Battery Division Member - Solar Engineering Research Racing Team Jan 2021- Aug 2021
University of Puerto Rico, Mayagüez Mayagüez, PR

- Configured the Battery Management System (BMS) for **420** Lithium-Ion cells, optimizing energy storage and conducting module testing to ensure reliable performance using tools such as Excel.
- Applied 3D modeling for battery components and led safety testing, contributing to the development of a high-efficiency, compliant energy system for the solar car, using tools like Shapr3D.

PUBLICATIONS

Emergency Shelter and Connectivity for Rural Communities After Natural Disasters: A Case Study Feb 10, 2024
Proceedings of International Structural Engineering and Construction (ISEC)

- Presented a modular design solution with solar energy and off-grid capabilities for rural communities impacted by natural disasters in P.R.

LEDERSHIP EXPERIENCE

President, Student Chapter of The College Of Engineers And Surveyors of Puerto Rico Jan 2018 – Jan 2019
University of Puerto Rico, Bayamon Bayamon, PR

- Managed a team of **6**, providing guidance and facilitating essential resources to support the professional development.

CERTIFICATION

- Certified Basic Incident Command System (ICS-200) - FEMA, Introduction to Incident Command Systems (ICS-100) - FEMA, Responsible Conduct of Research for Engineers - CITI Program

TECHNICAL SKILLS

- **Software:** Synergi Electric, GIS Mapping, Python, Proficient in MS Office, PowerBI, AutoCAD, MATLAB and Sharp3D
- **Languages:** English and Native in Spanish.