BSC JOCELLYN LUNA

AI & POWER SYSTEMS RESEARCHER

CONTACT

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Guayaquil, Ecuador

jocellynlg.github.io/

EDUCATION

Master's in Computer Science
ESPOL University
Expected: Summer 2025

Bachelor's in Computer Science
ESPOL University
2017 - 2022

SKILLS

- Power System Analysis
- ML and Optimization for Energy
- Data-Driven Energy Forecasting
- Programming (Python, R)
- ML frameworks (Tensorflow, PyTorch)
- Data Analysis and Visualization

LANGUAGES

- Spanish (Native)
- English (C1, TOEFL)

PROJECTS

- **AIAS**: Analytics and Artificial Intelligence for Sustainability.
- **IPEAR**: Intelligent Planning of Electrification for Agriculture.
- **HayIoT**: IoT Data Standardization.

AWARDS & HONORS

- **Diploma of Scientific Merit**, 2024
- **Top 2 Graduate**, 34th Promotion of the Computer Science Program, ESPOL University, 2022

REFERENCES

Jose Cordova-Garcia, PhD
ESPOL / Masters
Email : jecordov@espol.edu.ec

RESEARCH INTERESTS

Advanced machine learning applications in power system optimization, renewable energy integration, smart meters, and predictive modeling to enhance energy resilience and sustainability.

WORK EXPERIENCE

ESPOL - Technical Research Specialist 2023 - PRESENT

- Applied machine learning approaches for agricultural land use prediction (environmental monitoring) and explored the performance of various algorithms when altering the characteristics of training data for learning OPFs.
- **Publication Outcomes**: Publications 1 and 4.
- **Key Projects**: AIAS

Smart Energy Research Group - Research Assistant 2022 - 2023

- Designed deep learning models for solar irradiance forecasting and contributed to IoT data standardization for smart meter monitoring.
- **Publications Outcomes**: Publications 2, 3 and 5.
- **Key Projects**: IPEAR, HayIoT

ESPOL - Research Assistant 2020 - 2022

- Developed ML models for deforestation detection in the Amazon (**satellite data, remote sensing**) and brain lesion detection in MRI (**medical imaging**).

PUBLICATIONS

1. **Analyzing Data Characteristics for Learning OPFs**
   2024 IEEE Power & Energy Society (PES) ISGT
   Role: developed experiments to compare the performance of different models applied to the power flow problem.
2. **Machine Learning for Forecasting Solar Irradiance Using Satellite and Limited Ground Data**
   2024 Energy Sustainability - ASME
   Role: contributed to model design for hybrid data sources and solar forecasting.
3. **HayIoT: An IoT Standardization Architecture**
   2024 IEEE Sensors Applications Symposium (SAS)
   Role: Contributed in IoT architecture design and validation for standardizing data in smart meters contexts.
4. **CLED: Computer Lab Energy Dataset**
   2024 IEEE International Symposium on Measurements & Networking (M&N)
   Role: Assisted in data collection of a dataset for lab energy consumption.
5. **Identifying Data Issues in Networked Energy Monitoring Platforms**
   2024 IEEE International Symposium on Measurements & Networking (M&N)
   Role: Assisted with writing and data visualization to enhance clarity of the findings.
6. **Promoting Engagement in Computing Research for Non-CS Majors**
   2024 IEEE Global Engineering Education Conference (EDUCON)
   Role: Co-organized event; developed a theoretical framework for assessing the event's impact on students' research intentions.