Serena Langiano

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ABOUT ME

Data Analyst with 4 years of experience in challenging renewable energy-related projects. I am seeking for a position in a dynamic organization where I could synchronize with new technology while being resourceful, innovative and flexible.

WORK EXPERIENCE

01/01/2020 – CURRENT Lisbon, Portugal

DATA ANALYST EDP NEW R&D - CENTRE FOR NEW ENERGY TECHNOLOGIES

Data Analyst and Project Manager in EU funded projects pertinent to the areas of renewable energy generation and asset management. My main responsibilities include:

- Data Analytics to drive informed decisions in the planning and execution of Operation&Maintenance of PV and offshore wind parks. Key metrics derived from the analysis: energy production, plant availability, weather windows and fault occurrency. Data is retrieved from Copernicus'ERA5 through API requests in Python, originally availabe in netCDF format and subsequently manipulated by leveraging libraries such as Pandas and NumPy.
- Descriptive analytics on faults in different components of a PV park to assess the system's health and performance. The analysis is based on historical data stored in the company's database. Data is processed and manipulated in SQL. Most frequent commands include SELECT, ORDER BY, and SQL Functions.
- Data cleaning (including the IQR method) to preprocess data and remove outliers.
- Implementation of a GIS-based algorithm (Python) to compute the Levelized Cost of Energy for various renewable energy technologies.
- Data visualisation using Python (Matplotlib), Excel, and PowerBI to present data analysis findings to relevant stakeholders.
- Managed and coordinated international projects, collaborating with cross-functional teams and stakeholders from across Europe and the UK.

Other responsibilities:
- Project Management
- Budgeting
- Writing and review of projects' Deliverables and Reports

Tools: Python, SQL, Excel, PowerBI, Microsoft 365.

EDUCATION AND TRAINING

03/2016 – 07/2018 Cassino, Italy

MASTER'S DEGREE IN ELECTRICAL ENGINEERING University of Cassino and Southern Lazio

My thesis explored the possibility of using a probabilistic method (Universal Generating Function) to relate the variations of the voltages in a LV smart grid to those of the power injected by a photovoltaic power plant. In addition to that, a linearized load flow has been performed.

Specific competences achieved in: Power electronics, Electrical drives, Electric vehicles, Digital controllers, Renewable energy sources, Electrical transmission and distribution systems.

Final grade 110/110 cum laude (full marks with honors) |

Thesis Probabilistic modelling of a prosumer for the management of smart grids

09/2012 – 12/2015 Cassino, Italy

BACHELOR'S DEGREE IN INDUSTRIAL ENGINEERING University of Cassino and Southern Lazio

General skills achieved in Mathematics, Physics, Chemistry, Informatics and Thermodynamics. Professional skills achieved in Electronics, Automatics Measurements Systems, Electrical Systems and Electrical Machines.

Final grade 109/110 |

Thesis Interventions to increase the efficiency of a single-phase shunted pole motor for cooker hoods

LANGUAGE SKILLS

Mother tongue(s): **ITALIAN**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	C1	C1	C1	C1	C1
PORTUGUESE	A2	A2	A2	A2	A2

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

DIGITAL SKILLS

Coding skills

Python | SQL | Matlab | C++

Machine Learning

Supervised Learning | Unsupervised Learning | Reinforcement Learning

Microsoft Office

Word | PowerPoint | Outlook

Data visualisation

Excel | Matplotlib | MS PowerBI Desktop

ADDITIONAL INFORMATION

JOB-RELATED SKILLS

Job-related skills

- Knowledge of data analytics (data processing, descriptive analytics)
- Knowledge of data analytics tools (Python, SQL, Excel)
- Experience with data visualisation tools (Python, PowerBI)

ORGANISATIONAL SKILLS

Organisational skills

- Time management
- Planning and prioritisation
- Attention to detail
- Data organisation
- Documentation
- Collaboration and communication
- Adaptability and flexibility
- Problem-solving

COMMUNICATION AND INTERPERSONAL SKILLS

Communication and interpersonal skills

- Excellent communication skills gained through projects' presantations in meetings and conferences
- Very good team spirit acquired through collaborative international projects

CERTIFICATIONS

06/2023 – 08/2023

Microsoft Certified: Azure Data Fundamentals

Link https://learn.microsoft.com/en-gb/users/serenalangiano-9408/credentials/19061c06d53518be

06/2022 – 08/2022

Machine Learning Specialization

Specialization articulated over three Courses:

- Supervised Machine Learning: linear regression, logistic regression and gradient descent.
- Advanced Learning Algorithms: neural networks, decision trees, practical advices for ML algorithms.
- Unsupervised Learning, Recommenders, Reinforcement Learning: clustering, anomaly detection, collaborative filtering, content-based filtering and reinforcement learning.

Link https://www.coursera.org/account/accomplishments/specialization/XMH4BCSZP37G

HONOURS AND AWARDS

12/2018

'Maurizio Scarano' Degree Award – University of Cassino and Southern Lazio This acknowledgement annually awards a graduate in Engineering from University of Cassino and Southern Lazio who, through the elaboration of their thesis, has faced innovative topics, with particular attention to technological innovation and its replication potential in local SMEs.

PUBLICATIONS

Non-stationary Finite Horizon Markov Decision Process for O&M tasks recommendation and planning in PV parks

– 2023

International Conference on Artificial Intelligence for Energy and Renewable Energy Systems (ICAIERESYS-23), Coimbra, Portugal, 17th May.

AI4PV: Digital Twin and Artificial Intelligence for the Operation and Maintenance of PV parks – 2023

International Conference on Artificial Intelligence for Energy and Renewable Energy Systems (ICAIERESYS-23), Coimbra, Portugal, 17th May.

The impact of robotic technologies on timings and cost of offshore wind inspection and maintenance activities

– 2023

Author of Conference Poster WindEurope 2023, Copenhagen, Denmark, 25-27 April 2023.

Study on the offshore renewable energy potential in the Atlantic Ocean – 2022

Co-author of Conference Poster ICOE 2022, Donostia/San Sebastian, Spain, 18-20 October 2022.

Robotic technologies to increase site accessibility and reduce downtime in offshore wind farms – 2022

Co-author of Conference Poster - WindEurope Bilbao 2022, Bilbao, Spain, 5-7 April 2022.

Increasing the uptake of EO based services in the scope of offshore wind farm planning and operations activities

– 2022

Co-author of Conference Poster WindEurope 2022, Bilbao, Spain, 5-7 April 2022.

ATLANTIS - The Atlantic Testing Platform for Maritime Robotics – 2021

Conference Publication - Oceans 2021: San Diego-Porto.

Atlantis shaping future robotised o&m in offshore wind – 2021
IAHR's HydroLink 2021-3 Offshore Renewable Energy.