Paolo Francesco Duminuco

Climate and Weather data analyst

Introduction

Efficient researcher with a keen interest in the Earth and Climate sciences. Passionate about weather and highly motivated to advance the understanding of climate change. Frequently praised for being analytical, detail-oriented and possessing strong time-management skills. Experienced in satellite data analysis using ML algorithms and adept at conceptual thinking and modeling.

My Contact

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Hard Skills

- Climate models
- Agent-based models
- Object-oriented analysis
- Remote sensing for atmospheric science
- Infrared data interpretation
- Contingency tables
- Bootstrap and interpolation
- Machine learning for data classification (e.g. random forest, k-means, agglomerative hierarchical clustering)
- Python
- High-Performance Computing
- Linux
- R studio
- Netlogo
- QGIS
- Microsoft 365

Soft Skills

- Decision making
- Communication
- Fast-learning
- Time managing
- Critical thinking
- Problem solving

Education Background

- **Master Degree in Climate Studies | Wageningen University and Research**
  September 2021 - October 2023
  EQF Level 7
  Number of credits (ECF) 120
  Field of study: Environmental systems analysis, Programming in Python, Principle of Earth and Ecosystem Science, Soil-Vegetation-Atmosphere interactions, Agent-Based Modelling of Complex Adaptive Systems.
  Thesis: Private urban greening: an agent-based model to assess the private adoption and performances of green roofs under social interactions and climate scenarios. Grade: 9/10.

- **MOOC course in Basics of Remote Sensing | EO College**
  June 2023 - July 2023
  Field of study: Electromagnetic waves, Atmosphere scattering mechanisms, Image classification, Random forest algorithm, Confusion matrices.

- **Single learning activities | Alma Mater Studiorum - University of Bologna**
  September 2020 - July 2021
  Number of credits (CFU) 30
  Field of study: Physics, Organic chemistry, Ecology, Geology.

- **Bachelor Degree in Development and International Cooperation | Alma Mater Studiorum - University of Bologna**
  September 2017 - November 2020
  EQF Level 6
  Number of credits (CFU) 180 | Grade 108/110
  Field of study: Statistics, Environmental Economics, History, Sociology and cultural studies, Geography, Demography.
  Thesis: Into a sustainable future: a model to analyse the relation between lockdown and urban pollution

Languages

- **Italian**
  Native
- **English**
  Fluent
- **Spanish**
  Intermediate

Other Activities

- Scoutism - Piazza Armerina (Italy)
  2006 - 2018
- Participation to the Little Picture Competition from the European Space Agency
  November 2023
- Participation to a session of the European Parliament - Strasbourg
  February 2017

Professional Experience

- **CMCC foundation | Climate Research Intern**
  April 2024 - October 2024
  Key responsibilities:
  - Weather models' validation (WRF, BOLAM, MOLOCH).
  - Implementation of statistical techniques and machine learning algorithms.
  - Object-oriented analysis using satellite data (Meteosat second and third generations).
  - Data analysis using High-Performance Computing.
  - Quality programming in Python and Linux environments.

- **ABN AMRO Bank N.V. | Climate Risk Analyst Intern**
  March 2023 - August 2023
  Key responsibilities:
  - Analyze financial and climate risk data
  - Built new methodologies to identify threats based on the mentioned data
  - Prepare reports on the above information and communicate the insights of these reports
  - Hold several presentations and organize workshops
  - Participating in other teams' analysis by employing my QGIS skill

Presentations

Effects of Covid19-restrictions on urban pollution: an analysis on European cities and different mobility habits, Italian Association of Environmental and Resources Economist (IAERE) - Ninth annual conference, co-author.
April 2021