Romeo Silvestri

silveromeo98@gmail.com | romeosilvestri.github.io | www.linkedin.com/in/romeo-silvestri | www.github.com/RomeoSilvestri

Summary

Applied Machine Learning Engineer with **2+ years of work experience** and a strong foundation in statistics and data science. Focused on AI research and development, specializing in advanced model design and deployment through MLOps workflows. Currently seeking a **mid-level position** to apply my technical expertise and research experience in impactful projects.

Skills

Programming Languages & Libraries: Python, R, SQL, Hugging Face, NumPy, Pandas, PySpark, PyTorch, Scikit-learn, TensorFlow
Tools & Databases: Airflow, Docker, Excel, Git, LangChain, MLflow, Power BI, Prefect, Spark, MongoDB, MySQL, PostgreSQL
Techniques: A/B Testing, Data Mining, Data Visualization, Classification, Clustering, Regression, Statistics, Machine Learning, Deep Learning, Model Monitoring, Generative AI, Neural Networks, Natural Language Processing (NLP), Spatial Interpolation, Time Series

Work Experience

ML Engineer | Fondazione Bruno Kessler (FBK), Trento   12/2023 - Present
- Optimized ML pipelines in an advanced AI research and production environment using **Python**, **LangGraph**, **Prefect**, **MLflow**, and **GitLab**, while collaborating closely with experts to address agricultural challenges and the complex dynamics of the domain.
- Designed and tested a Decision Support System (DSS) for the IRRITRE project, integrating Internet of Things (IoT) and weather data with fuzzy logic to combine expert knowledge with field insights. Currently adopted by several agricultural consortia, the system has enabled estimated annual savings of **€30.000** per consortium in water and electricity costs.
- Developed a multi-agent LLM-based chatbot for the European IT4LIA AI Factory project, leveraging pre-trained models to assist farmers. The system provides real-time, data-driven advice on irrigation, integrating legal guidelines and technical practices, with support for global (AquaCrop) and region-specific recommendation models.
- Built multi-day time series forecasting models for sensor trends using ARIMA, XGBoost, and LSTM neural networks, achieving around **5%** prediction error through advanced feature engineering, hyperparameter tuning, and validation techniques.

Data Scientist | Youbidata, Bologna   10/2023 - 11/2023
- Utilized **Python**, **PostgreSQL**, and **Power BI** for analytics and developed a centralized dashboard for financial monitoring.
- Managed an end-to-end consulting project to optimize financial operations of a company and design meaningful KPIs.

Statistician (Internship) | ISTAT, Rome   03/2023 - 08/2023
- Processed and analyzed national demographic data using **Excel**, **R**, and **SQL** to uncover socio-economic trends. The analysis outcomes were leveraged to create periodic reports, offering valuable insights to support strategic decisions.
- Evaluated the Austrian quality framework's suitability for the Italian Census, achieving statistically significant results.

University and Private Tutor | Sapienza University, Rome   09/2020 - 06/2022
- Supported the study of statistics-related subjects and managed IT services.

Education

M.Sc. in Statistics & Data Science | Sapienza University of Rome   11/2020 - 03/2023
Thesis: *Analyzing Forecasting Models for Real Estate Markets with a Case Study of Madrid Prices*   Graduation Grade: 107/110

B.Sc. in Statistics | University of Padua   10/2017 - 11/2020
Thesis: *The Impact of Migration on Population Dynamics in Italian Provinces*   Graduation Grade: 102/110

Publications

Smart Irrigation with Fuzzy Decision Support Systems in Trentino Vineyards	MDPI Sensors
A Fuzzy Decision Support System to Optimize Irrigation Practices in Trentino Region	CoDIT 2025
Comparative Analysis of Soil Moisture Interpolation Techniques in Apple Orchards of Trentino Region	IEEE MetroAgriFor 2024

Additional Information

Certifications: Deep Learning (DeepLearning.AI), Google Data Analytics, IBM Data Science
Organizations: Italian Volunteers Blood Donation (AVIS), Mensa High IQ Society
Interests: Art, Chess, Mixed Martial Arts, Music, Poetry, Technology, Traveling

I authorize the processing of personal data contained in my curriculum vitae based on art. 13 GDPR 679/16.