

Simone Massaro

DATA SCIENTIST · FOREST RESEARCHER · SOFTWARE ENGINEER

✉ simone.massaro@mone27.net 🌐 mone27 🌐 Simone Massaro

Experience

44moles GmbH, Göttingen, Germany

Interim Chief Technology Officer Head of Data Science Data Scientist

Nov 2024 - Present

Apr 2024 - Oct 2024

Oct 2023 - Mar 2024

FOREST MEASUREMENTS USING TERRESTRIAL LASER SCANNING

- Design and implement deep learning models for point cloud processing to perform semantic segmentation, instance segmentation, and species classification.
- Create algorithmic models to identify trees in terrestrial point clouds using a custom C++ library.
- Develop a pipeline for automated parallel processing of point clouds using a custom Python implementation on a Ray backend and PostgreSQL database, integrated with an internal dashboard.
- Develop machine learning models for quality control of pipeline outputs.
- Manage a data science team of five, including recruiting and onboarding new employees.
- Oversight of company's technology department, which includes the data science and web development teams.
- Develop the company's technology strategy.

Research Assistant

Università degli Studi della Tuscia, Viterbo, Italy

Jan 2025 - Present

- Integrate conversational AI and large language models for smart food processing. Development of AI Agent using the cheshire-cat-ai platform to control drying processes.

Data Analyst Intern

Arbonaut Oy, Joensuu, Finland

FOREST MEASUREMENTS USING AERIAL LASER SCANNING

Apr 2023 - Sept 2023

- Developed Deep Learning model for single tree species classification using orthophotos and LiDAR.
- Estimated thinning volume using remote sensing for the entire country of Finland.
- Conducted spatial analysis of large-scale remote sensing data and field measurements.

Research and Teaching Assistant

Georg-August-Universität Göttingen, Germany

Oct 2021 - Mar 2023

- Teaching assistant for the courses: Advanced statistics in R, Ecosystem and Analysis Processing, Introduction to R.
- Conducted a literature review of AI research papers for an ecosystem resilience project.

Research Assistant

Università degli Studi della Tuscia, Viterbo, Italy

Jan 2019 - Oct 2020

- Developed Convolutional Neural Networks (CNN) for classification and segmentation of fruit samples in smart air drying processes.
- Published: Moscetti, R., Massaro, S., Chillemi, G., Sanna, N., Sturm, B., Chakravatula, S. S. N., & Massantini, R. (2019). Recognition of inlet wet food into the drying process through a deep learning approach. EuroDrying 2019 Torino.

INTERNATIONL ASSOCIATION WITH OVER 10000 MEMBERS

- General coordination, supervision and governance of the association.
- Finance and administration of the organization, including fundraising and ERASMUS+ grant application.
- Coordinated internal and membership department, consisting of over 30 international volunteers.
- Supported engement with high-level external partners.
- Developed and mantained of association website.
- Organization of international events and conferences.

Education

MSc Forest and Ecosystem Sciences**Georg-August-Universität Göttingen, Germany**

ECOSYSTEM ANALYSIS AND MODELLING

Nov 2020 - Mar 2023

- Main subjects: Statistics and Data Analysis, Remote Sensing, Ecosystem Modelling, Bioclimatology.
- Master Thesis: "Evaluation of Kalman Filter for meteorological time series imputation for Eddy Covariance applications".
- Final grade: 1.1/1.0 with distinction.

BSc Forest and Nature Sciences**Università degli Studi della Tuscia, Viterbo, Italy**

Oct 2017 - Sept 2020

- Main subjects: Forest Ecology, Forest Management, Nature Conservation.
- Bachelor thesis: "Evaluation of low-cost anemometers for micrometeorological applications".
- Final grade 110/110 cum laude.

Skills

Programming Languages Python (advanced), R (advanced), C++ (intermediate), SQL (intermediate), PHP (intermediate), JavaScript (intermediate), Rust (intermediate), Julia (beginner)

Libraries Pandas, Numpy, Polars, Tidiverse, Geopandas, Scikit-learn, PyTorch, Fastai, Fastcore, Ray, Matplotlib, Seaborn, Plotnine

Technical skills Linux sysadmin, QGIS, PostgreSQL, Docker, Docker Compose, Cloud infrastructure, DevOps

Leadership Team Management, Project Management, Event Organization, Fundraising, Public Speaking

Languages Italian (native), English (C2), German (A2), Spanish (A2)