

# Simone Massaro

DATA SCIENTIST · FOREST RESEARCHER · SOFTWARE ENGINEER

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

## Experience

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### Interim Chief Technology Officer Head of Data Science Data Scientist

44moles GmbH, Göttingen, Germany

Oct 2023 - Present

FOREST MEASUREMENTS USING TERRESTRIAL LASER SCANNING

- Development of Deep Learning models for point cloud processing (semantic segmentation, instance segmentation and species classification)
- Development of algorithmic model to identify trees in terrestrial point cloud (using custom C++ library)
- Development pipeline for automated parallel processing of point clouds (custom python on ray backend, PostgreSQL database) including internal dashboard
- Development ML models for quality control of the pipeline output
- Management of data science team (5 people), including hiring of new employees
- Development company technology strategy and Overseeing web development team

### Research Assistant

Università degli Studi della Tuscia, Viterbo, Italy

Jan 2025 - Present

- Integrating 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

- Development Deep Learning model for single tree species classification using Orthophotos and LiDAR
- Estimation of the thinning volume using remote sensing for the entire country of Finland
- 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 R, Ecosystem and Analysis Processing, Introduction to R
- Literature review of AI papers for ecosystem resilience research project

### Research Assistant

Università degli Studi della Tuscia, Viterbo, Italy

Jan 2019 - Oct 2020

- Development of Convolutional Neural Networks (CNN) for classification and segmentation of fruit samples in smart air drying processes.
- Publication: Moschetti, 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.

### Executive Secretary Vice President Head of Web

International Forestry Students' Association

Aug 2018 - Aug 2022

INTERNATIONL ASSOCIATION WITH OVER 10000 MEMBERS

- General coordination and supervise governance, finance and administration of the organization. (50+ volunteers at international level)
- Fundraising and ERASMUS+ grant application
- Coordination internal and membership department
- Support engagement high-level external partners
- Development and maintainance fo association website

## Education

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### 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

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<b>Programming Languages</b>	Python (advanced), R (advanced), C++ (intermediate), SQL (intermediate), PHP (intermediate), Web Development (intermediate), Rust (intermediate), Julia (beginner)
<b>Libraries</b>	Pandas, Numpy, Polars, Tidyverse, Geopandas, Scikit-learn, PyTorch, Fastai, Fastcore, Ray, Matplotlib, Seaborn, Plotnine
<b>Technical skills</b>	Linux sysadmin, QGIS, DevOps, PostgreSQL, Docker, Docker Compose
<b>Leadership</b>	Team Management, Project Management
<b>Languages</b>	Italian (native), English (C2), German (A2), Spanish (A2)