

Simone Massaro

DATA SCIENTIST · SOFTWARE ENGINEER · FOREST RESEARCHER

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

Experience

Interim Chief Technology Officer Head of Data Science Data Scientist

44moles GmbH, Göttingen, Germany

Oct 2023 - Present

FOREST MEASUREMENTS USING TERRESTRIAL LASER SCANNING

Forest Research:

- Development of algorithmic model to identify trees in terrestrial point cloud
- Design and implementation of pipeline for forest point cloud processing

Software Engineering:

- Development of internal C++ library with Python bindings for point cloud processing
- Development pipeline for automated parallel processing of point clouds (custom python on ray backend, PostgreSQL database)
- Development of internal dashboard (Symphony)
- Maintenance of on-premises and cloud infrastructure (Linux and Windows machines and Digital Ocean services)

Data Science:

- Contribution to development of Deep Learning models for point cloud processing (semantic segmentation, instance segmentation and species classification)
- Development of ML models for quality control of the pipeline output
- Visualization of forest data

Leadership:

- Direct management of the data science team (up to 5 people)
- Overseeing web development team
- Leading hiring of new employees
- Development of company technology strategy

Intern

Arbonaut Oy, Joensuu, Finland

FOREST MEASUREMENTS USING AERIAL LASER SCANNING

Apr 2023 - Sept 2023

- Development of 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

Executive Secretary Vice President Head of Web

International Forestry Students' Association

Aug 2018 - Aug 2022

INTERNATIONAL ASSOCIATION WITH OVER 10000 MEMBERS

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

- Development and maintenance of website for LSSC Course part of CPF (FAO, ITTO, and IUFRO) project on Global Forest Education.

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), Web Development (intermediate), Rust (beginner), Julia (beginner)
Libraries	Pandas, Numpy, Polars, Tidyverse, Geopandas, Scikit-learn, PyTorch, Fastai, Fastcore, Ray, Matplotlib, Seaborn, Plotnine
Technical skills	Linux sysadmin, QGIS, DevOps, PostgreSQL, Docker
Leadership	Team Management, Project Management
Languages	Italian (native), English (fluent), German (basic), Spanish (basic)

Publications

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.