

Ivan Palmegiani, MSc

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Address and phone number available on request



Profile

Researcher with cross-disciplinary expertise extending from ecology and natural sciences to machine learning. Proponent of nature-based solutions for climate change adaptation and mitigation, well informed on environmental technology. Capable of knowledge-transfer and data translation. Team player, also able to take charge of tasks individually. Constructive critical thinker. Highly motivated and positive towards challenges. Strong analytical mindset and excellent organization skills. Solution oriented and careful about details. Curious and eager to learn.

Technical expertise

Python programming | R coding | Geographic Information System - QGIS | Relational (geo)databases - PostgreSQL-PostGIS | Remote Sensing | Machine Learning | Geodata analytics | Time series analyses | Data visualization | Data reporting

Languages

English - IELTS certification level C1 • German - TELC certification level B1 • Italian - mother tongue • Spanish - fluent • Portuguese - fluent

Professional Experience

Environmental Researcher | (Geo)Data Scientist, Nov. 2019 - Present

[SmartCloudFarming GmbH \(DE\)](#)

Development of ML models for the estimation of soil water content till 90 cm depth by integrating satellite data and ground measurements - Contribution to the development of DL models for the estimation of soil organic carbon from satellite data - Content crafting for funding applications

[University of Primorska \(SL\)](#)

Development of functional solutions for data storage in relational databases - Data query - Consulting on wildlife data management

[EarthRatings UG \(DE\)](#)

Search and Web Crawling of Corporate Environmental Footprint (CEF) and Social Responsibility (CSR) data - Data cleaning and preparation - Exploratory data analyses - Feature Engineering

Professional re-qualification, Oct. 2018 - Nov. 2019

Intensive technical training | German language course | Conflict management and non-violent-communication (NVC) self-training | Personal development

PhD Candidate, May 2014 - Jun. 2018 | **Research Assistant**, Apr. 2013 - Sept. 2013

[IZW - Leibniz Institute for Zoo and Wildlife Research \(DE\)](#)

Main goal: Investigating the social system of the cheetah in central Namibia.

- Collected, processed and analyzed time series of geo-referenced data from satellite telemetry

- Performed spatial and movement analyses on GPS tracking data
- Modelled the use of space by individuals with linear and nonlinear regression models
- Collected and analyzed presence-absence data via camera-trap surveys
- Designed and maintained online and offline (geo)databases
- Engaged with stakeholders, and made scientific results accessible to them through public talks, data reports and visualizations
- Coordinated data collection in the field, supervised volunteers
- Organized scientific symposia

Research Assistant, Dec. 2012 - Feb. 2013 | **Research Technician**, Feb. 2012 - Nov. 2012

[CIBIO - Research Center in Biodiversity and Genetic Resources \(PT\)](#)

Main goal: Investigating the spatial ecology of endangered wildlife species in the Iberian peninsula (Portugal and Spain).

- Collected and analyzed satellite telemetry and geo-referenced environmental data
- Modelled species distribution in relation to environmental variables using linear and nonlinear regression models
- Designed and maintained relational (geo)databases
- Engaged with stakeholders, and made scientific results accessible to them through public talks, data reports and visualizations

Research Technician, Nov. 2010 - Nov. 2011

[Department of Zoology and Evolutionary Genetics, University of Sassari \(IT\)](#)

Main goal: Investigate spatial distribution, abundance and reproductive success of wolves in central Italy.

- Collected geo-referenced environmental data
- Collected and analyzed bio-acoustic data
- Collected and analyzed presence-absence data via camera-trap surveys

Education

Master of Science (MSc), Jul. 2010

Environmental Sciences and Natural Resources Management, University of Sassari. Grade: 110/110 *cum Laude*
Environmental modelling, statistical inference, advanced statistical theory, zoocenosis and wildlife conservation, wildlife management, genetics, plant conservation, environmental economics, systems ecology, landscape ecology, regional geology, sedimentology.

Bachelor of Science (BSc), Feb. 2008

Environmental Sciences, University of Perugia. Grade: 107/110

Principles of biology, geology and ecology. The course of study covered a wide range of subjects to provide the students with the solid background required to undertake ecological and environmental studies.

Further training

Copernicus MOOC, Sept. 2020 - *ongoing*

Copernicus programme, from European Union and European Space Agency

Overview on the programme | Copernicus data and services | Renewable Energy | Security and Emergency Management | Resource Management | Land Use and Management | Air quality, water pollution and ecosystem health monitoring | Integrating Copernicus data with other sources: Machine Learning, AI | Ideation | Prototyping | Developing | Collaboration

e-Learning on Digital Agriculture, Aug. 2020

Open Learning Campus, World Bank Group

Overview of Digital Agriculture | ICT and Digital Tools for Enhancing Productivity on the Farm | Empowering Smallholder Farmers through ICT/Digital Tools in Financial Services | Strengthening Agricultural Market Access with ICT and Digital Tools | Using ICT for Remote Sensing, Crowdsourcing, and Big Data

Echoes in Space, July 2020

EO College, European Space Agency - Friedrich-Schiller-Universität Jena

History of Radar technology and the discovery of electromagnetic waves | Image acquisition | Geometry of airborne and space borne Radar systems | Land applications of Radar remote sensing | Applications of radar remote sensing over Water | Application of Radar remote sensing for Hazard management

Data Science Bootcamp, Aug. 2019 - Nov. 2019

Business Trends Academy

Data protection and ethical matters | Linear and nonlinear regression | A/B testing | Hypothesis testing | Data visualization in Tableau | Object oriented programming (OOP) | Python modules and functions | Pandas and NumPy | Multiprocessing and multithreading | RESTful API | Webscraping | Neural Networks and Machine Learning techniques | Keras, Anaconda and TensorFlow

Movement Ecology Summer School, Aug. 2015

Population Ecology Research Group, University of Zurich

GIS and remote sensing in R | Characterization of movement trajectories | Home range analysis | Habitat selection modelling | Integration of data from alternative sensors and future perspectives

Next Generation Data Management in Movement Ecology, Jul. 2015

IRSAE, International Research School in Applied Ecology - FEM, Edmund Mach Foundation

Spatial database management in PostgreSQL/PostGIS | Movement data analysis in R

Multivariate Data Analysis for Ecology and Evolution in R, Nov. 2012

CIBIO - Research Center in Biodiversity and Genetic Resources

Explanatory methods (PCA, PcoA, MDS, clustering) | Inferential methods (Randomization, bootstrap, jackknife, Monte Carlo, GLM, PLS, CanCor, Mantel Test) | Evolutionary and ecological Non-Independence (PGLS, PIC, rates of change, spatial autocorrelation, spatial GLS) | Model selection (i.e. Hypothesis testing vs information criteria) | Analysis of dispersion (i.e. Convex hulls area/volume, nearest neighbor, centroid size, eccentricity)

Biostat 2011 – Statistic inference in Biology and Human Sciences, Jun. 2011

UniASTISS, Department of Statistics - Purdue University, Department of Economy - UniMORE, Italian Institute for Philosophical Studies, Department of Statistics - Bologna University, Department of Human and Animal Biology - University of Turin, Department of Social Research - University of Eastern Piedmont, Asti Association for Scientific and Technological Development

Linear and nonlinear regression models | Non-parametric regression model | Principal components analysis | Factor analysis | Correspondence analysis | Cluster analysis | R coding

Hobbies and interests

Cooking • Indoor gardening • Tai Chi • Outdoor sports and activities such as climbing, bouldering, hiking, biking, canoeing, camping • DIY and Handicraft • Music and Arts • Urban agriculture