MARIA POLYCHRONIADOU

GIS · Remote Sensing · UAV Operations

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PROFESSIONAL SUMMARY

Geospatial and Remote Sensing Specialist pursuing an MSc in Applied Geoinformatics with a foundational background in Heritage Management. With background in satellite Earth Observation (Sentinel-2, Landsat), 3D point cloud reconstruction (LiDAR, Photogrammetry), and geospatial scripting with Python, looking for an entry level GIS & Remote Sensing position. Experienced in bridging deep learning (CNNs, ANNs) with spatial analytics to automate feature extraction and environmental risk modeling. Skilled in GIS workflow across QGIS and ArcGIS Pro.

CORE TECHNICAL SKILLS

Geospatial & Remote Sensing: QGIS, ArcGIS Pro, Sentinel-2, Landsat, Multispectral Analysis, Spectral Indices (NDVI, NDBI), Raster & Vector Geoprocessing.

3D, LiDAR & Photogrammetry: LiDAR Point Cloud Processing, CloudCompare, Agisoft Metashape, 3D Mesh Generation, DEM/DSM/DTM Extraction, UAV Mission Planning & Data Operations.

Programming & Machine Learning: Python (ArcPy, NumPy, Pandas, GeoPandas, Rasterio, GDAL), MATLAB, CNNs & ANNs, Logistic Regression (SPSS).

Languages & Certifications: English (C2 - ECPE Proficient, Fluent), Greek (Native), Italian (A2); UAV Pilot Training in progress.

EDUCATION

MSc, Geography and Applied Geoinformatics | University of the Aegean | *2025 – present*

- **Core Curriculum**: Remote Sensing, Advanced Spatial Analysis, Spatial Database Management (PostgreSQL), Python Scripting, UAV Flight Operations, and LiDAR processing.
- **Thesis Research (in progress)**: Automated damage detection on heritage monuments using Deep Learning (CNNs), high-resolution UAV imagery, and 3D LiDAR point clouds.
- Member of the Remote Sensing and GIS Group

BA, Cultural Heritage Management and New Technologies | University of Patras | *2018 – 2024*

- **GPA**: 7.32 | **Major**: Cultural Resources Management
- **Core Curriculum**: Archaeology, Art History, History

Geoarchaeology — Educational Program | National Kapodistrian University of Athens | *2024 – 2025*

KEY GEOSPATIAL & MACHINE LEARNING PROJECTS

Binary Classification of Built Environment via Artificial Neural Networks (ANN) | Cairo Metropolitan Area

- Processed decadal multi-temporal Sentinel-2 multispectral imagery (2015–2025) using vectorized matrix operations in MATLAB.
- Trained a pattern-recognition neural network achieving 97%+ classification accuracy to quantify over 530 km² of urban expansion and generate land-use transition maps

Wildfire Risk Susceptibility Modeling | Lesvos UNESCO Global Geopark

- Built a spatial assessment workflow in ArcGIS Pro and Python, extracting 10 normalized terrain and infrastructure predictors across 795 sample points.
- Fitted a Spatial Logistic Regression model in SPSS to evaluate variable weights, producing a classified ignition susceptibility surface divided into four relative risk zones

Multi-scale UAV Mapping of Plaka Park, Lesvos Petrified Forest Geopark

- Planned and conducted multi-scale drone surveys using a DJI Mavic 3E (0.67 cm/px GSD) and Matrice with Zenmuse L1 LiDAR.
- Processed dense point clouds across Agisoft Metashape and CloudCompare to perform C2C comparative alignment, generating bare-earth DTMs and a 5.6M-face 3D textured mesh

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PROFESSIONAL EXPERIENCE

Heritage Resources Manager | POLITISTICA - Cultural Technology Resources | *Feb 2025 – Dec 2025*

- Conducted heritage research, conservation and spatial documentation of archaeological sites, museum artifacts, and listed buildings
- Supported work for **ELLIE** (On the Us**E** of Internet of Senses for the Cu**L**tura**L** Her**I**tag**E**) - HORIZON EU.

Historian | History Centre of Thessaloniki | *2022* | *(internship)*

- Conservation, restoration, analysis, digitisation and archive historical artifacts
- Digitised and edited an early-20th-century book, gaining experience in digital heritage workflows

Front Desk Receptionist | Windmill Hotel, Zakynthos | *2024*

- Managed front desk operations, guest reservations, and customer support during peak tourist season, developing strong communication and problem-solving skills.

VOLUNTEERING

Project Manager — Employability & Information Centre | Intereuropean Human Aid Association | *2021*

- Spearheaded a dedicated information and employability integration unit supporting international beneficiaries with digital career skills, resume optimization, and labor market transitions.

- Coordinated multi-stakeholder logistics across partner NGOs, local government representatives, and community employers while managing volunteer distribution operations.

HONORS & EXTRACURRICULARS

- **Greek National Swimming Champion & Record Holder:** Multi-time national gold medalist (2015, 2018) and national record holder (2018).
- **Scuba Diving:** SSI Certified - Open Water, Deep Diving & Night and Limited Visibility
- **Conservation & Restoration of Frescoes** | European Heritage Volunteers - training program | Portel, Portugal
- **Licenses:** Full Clean Driving License (Category A & B).