



Professional Summary

Geospatial scientist with 10+ years of Python programming experience and demonstrated expertise in GIS, remote sensing, and Earth observation (EO).

Skilled in applying data science and AI to real-world problems, including geospatial analytics, modeling, and digital agriculture solutions. Proactive with international experience. Currently a Research Assistant at the BioSense Institute, contributing to national and international projects by developing AI models, analyzing big geospatial datasets, and delivering actionable insights. Experienced in collaborating with interdisciplinary teams, driving projects from concept to implementation, and communicating technical results effectively to stakeholders. Other activities:

- Co-organized “Geospatial Community of Serbia Meet Ups”
- Winner of UNDP Serbia “Clean air” challenge call (www.dim.rs)
- Contributed to the PARSEC Accelerator by evaluating EO start-up projects and advising teams on technical development strategies
- Active on social media

Skills

QGIS | Python | Machine Learning | Optical & SAR Satellite Imagery
(Sentinel-1/2, Landsat, PlanetScope) | Shapely | NumPy | Pandas |
Matplotlib | Scikit-learn | PyTorch | GDAL | SNAP | ArcGIS | Google
Earth Engine | openEO | Image Processing | Data Cleaning &
Manipulation | Feature Engineering | Statistical Analysis | Data
Visualization | Raster & Vector Data | Tabular Data | Git | Microsoft
Office | Adobe Photoshop | Video Editing | AI tools (ChatGPT, Grok,
etc.)

Scientific & Technical Writing | Public Speaking | Networking | Event
Organization | Mentoring | Proactive Problem-Solving | Teamwork |
Quick Learner | Hardworking

B-driving licence | Drone operating licence | Languages: Serbian
(native), English (fluent), German (A2)

Experience

 **BioSense Institute, University of Novi Sad** | Research Assistant | (Apr. 2018 – present)

- Processed radar & optical satellite data for geospatial analytics in agriculture (crop monitoring) and disaster management sector (burned area mapping, fire & flood detection)
- Developed ML/DL pipelines for crop mapping & crop health monitoring
- Contributed to successful funding proposals
- Mentored students during internships

 **Finnish Geospatial Institute (FGI/NLS)** | Researcher | (Jun. 2016 – Dec. 2017)

- Delivered EO solutions across urban, agricultural, and forestry domains, contributing to international projects funded by the Academy of Finland and the European Space Agency (ESA)
- Developed satellite-based change detection methods for urban areas (later integrated with UAV and mobile LiDAR for detailed mapping)
- Implemented methods for clear-cut detection in forestry
- Processed and analyzed multispectral satellite imagery to monitor crop development

 **TU Wien – Dept. of Geodesy & Geoinformatics** | Guest researcher | (Sep. – Dec. 2015)

- Assessed the geometric quality of Sentinel-2 imagery shortly after its launch by ESA. Extracted and compared linear features (roads, riverbanks) from Sentinel-2 and very-high-resolution aerial imagery, performing statistical analysis of matching scores
- Awarded an OeAD scholarship (Government of Austria) for this work, which was further developed into a master thesis: “Assessment of the Geometric Quality of Sentinel-2 Data”

Education

University of Belgrade | Faculty of Civil Engineering, Dept. of Geodesy and Geoinformatics

PhD in Geodesy, 2018 – exp. 2026

MSc in Geodesy, 2013 – 2016

BSc in Geodesy, 2010 – 2013

Selected publications (h-index 8)

[Full list](#) 

- **Pandžić, M.**, Pavlović, D., et al., 2024. Interseasonal transfer learning for crop mapping using Sentinel-1 data. *International Journal of Applied Earth Observation and Geoinformation*, 128, p.103718. (M21)
- **Pandžić, M.**, Tagarakis, et al., 2022. Potential of Sentinel-2 Satellite and Novel Proximal Sensor Data Fusion for Agricultural Applications. In *Information and Communication Technologies for Agriculture—Theme I: Sensors* (pp. 175-198). Cham: Springer International Publishing. (M14)
- Matikainen, L., **Pandžić, M.**, et al., 2019. Toward utilizing multitemporal multispectral airborne laser scanning, Sentinel-2, and mobile laser scanning in map updating. *Journal of applied remote sensing*, 13(4), pp.044504-044504. (M23)