

Jan Magnuszewski

GEOSPATIAL DATA SCIENTIST

Contact

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About

Passionate and highly motivated individual with expertise in **geospatial analysis, machine learning** and **web development**. Demonstrated commitment to leveraging **open-source geospatial** technologies for innovative solutions in **sustainability, urban studies** and **social sciences**.

Skills

- Python, (PyTorch, Xarray, STAC, Dask)
- SQL, PostgreSQL
- Google Earth Engine
- Tableau, Power BI,
- Alteryx
- HTML, CSS, JS
- R, NetLogo
- QGIS
- Web Server Management
- Adobe Software

Experience

Feb 2025 - Present

Location Analytics Consultant - Geospatial Data Science

CACI Ltd - London, UK

- Delivering **geospatial data science** solutions for retail and location planning, including customer **segmentation** and spatial **modelling**.
- Automating analytical **processes** using modern geospatial technologies, **Python scripting**, and **Alteryx workflows**.
- Working with **AWS data infrastructure** to enhance **data products** and streamline **analytical workflows**.
- Creating **interactive dashboards** in Tableau and Power BI as Client deliverables

Dec 2019 - Present

Technical Operations Manager

E-commerce Business

- Developed interactive dashboards to visualise customer data, implementing automated geocoding pipelines
- built custom Python integrations with accounting software API to automate order processing and financial workflows;
- Maintain and optimise 40+ WordPress websites, handling performance tuning and security updates
- Analyse customer sales data to inform business decisions and improve operational efficiency

Interests

- Geospatial technologies
- Data Engineering
- Data Science and AI
- Cloud-native geospatial
- Smart Cities
- Australasia
- Listening to podcasts
- Backpacking
- Hiking

Languages

- English (fluent)
- Polish (native)
- French (basic)

Sep 2023 - Sep 2024

Research Assistant (remote, part-time)

The Local Data Company

- reviewing local council websites to gather data on new developments

Experience continued

Jul 2021 - Aug 2021

QStep Research Placement

University of Leeds

- sourced and analysed data on COVID-19 outcomes and population demographics in the UK and conducted spatial statistical analysis to identify relationships with socioeconomic attributes
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Education

London, UK (Sep 2023 - Aug 2024)

University College London, The Bartlett Centre for Advanced Spatial Analysis

MSc Urban Spatial Science (Distinction)

- studied quantitative methods, machine learning, simulation and modelling techniques for urban problems
- developed expertise in managing large spatial data in the cloud with PostGIS, DuckDB and Google Earth Engine

Leeds, UK (Sep 2019 - Jul 2023)

University of Leeds

BA Economics and Geography (First-Class)

- studied geospatial and economic modelling techniques, focusing on GIS, geocomputation and econometric modelling methods
- for the dissertation developed a spatial urban liveability index, achieving a mark of 90%

Seoul, South Korea (Aug 2021 - Jul 2022)

Hanyang University

Urban Planning and Engineering (Year Abroad)

- studied data science foundations, including linear algebra, machine learning, databases and time series forecasting
- gained insight into the urban planning practices in Seoul and the geopolitical climate of the Asia-Pacific region

Tokyo, Japan (Jun 2023 - Jul 2023)

Sophia University

Global Sustainability (Summer School)

- broadened my understanding of sustainability and environmental governance in Japan and the APAC region
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Publications

Applied Spatial Analysis and Policy, Accepted: 19 January 2025

The Auckland Urban Liveability Index: A Mechanism for Quantifying and Evaluating Modern Urban Densification

Jan Magnuszewski, Roger Beecham & Luke Burns

doi.org/10.1007/s12061-025-09643-9

Abstract: We present the Auckland Urban Liveability Index (AULI), an indicator that quantifies modern liveability at the neighbourhood level in Auckland. The index comprises 29 variables spanning several components of liveability: social infrastructure, green space, transportation, safety and diversity. Each is documented transparently with accompanying data and code...

Projects

Apr 2024 - Aug 2024, London, UK

Mapping Precarious Urban Areas in Central America

jan.magnuszewski.com/unitac-precarious-areas

Master's dissertation project in partnership with UNITAC, focused on using open data to enhance informal settlement detection;

- adapted a pretrained DeeplabV3 model for multimodal input, achieving nearly 30% improvement in predictive accuracy (F1 score) over the baseline
- created an interactive web map and a GitHub repository for wider reproducibility