# JAN MAGNUSZEWSKI

## Geospatial Data Science | GeoAI | Machine Learning

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

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## Education

**University College London, The Bartlett Centre for Advanced Spatial Analysis**  ·  09/2023 - 08/2024
**MSc Urban Spatial Science**  ·  **London, UK**

- studied advanced **quantitative** methods, **machine learning, modelling** and **simulation** techniques for urban problems
- developed expertise in managing large **spatial data** in the cloud with **PostGIS**, **DuckDB** and **Google Earth Engine**
- completed a dissertation project with **UNITAC**, developing a **multiresolution deep learning** model for slum mapping

**University of Leeds**  ·  09/2019 - 07/2023
**BA Economics and Geography (First-Class)**  ·  **Leeds, UK**

- learned **geospatial** and **economic modelling** techniques, focusing on **GIS**, **geocomputation** and **econometric** modelling methods
- conducted in-depth research on **urban liveability**, developing an urban liveability index achieving a mark of 90%

**Hanyang University, Year Abroad**  ·  08/2021 - 07/2022
**Urban Planning and Engineering**  ·  **Seoul, South Korea**

- 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

**Sophia University, Summer School**  ·  06/2023 - 07/2023
**Global Sustainability**  ·  **Tokyo, Japan**

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

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## Experience

**Self-employed**  ·  12/2019 - Present
Online Activities Manager (part-time)  ·  **Remote**

- developed 40+ **WordPress websites**, managed an **ecommerce store, automated** business processes, analysed sales data and developed **web dashboards**

**The Local Data Company**  ·  09/2023 - Present
Research Assistant (part-time)  ·  **Remote**

- reviewing local council websites to gather data on **new developments**

**University of Leeds**  ·  07/2021 - 08/2021
QStep Research Placement  ·  **Leeds, UK**

- 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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## Skills

Python · PyTorch · R · QGIS · SQL · POSTGIS · Google Earth Engine · Git · NetLogo

basic Frontend (HTML, CSS, JS) · Mapbox GL JS · Adobe Software

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## Projects

### Mapping Precarious Urban Areas in Central America

04/2024 - 08/2024,
**London, UK**

Master's dissertation project in partnership with **UNITAC**, focused on using **open data** to enhance informal settlement detection;
- combined open **Sentinel-2 satellite** imagery with building footprint data from **Overture Maps Foundation**
- adapted a **pretrained DeeplabV3** model for **multimodal input**, achieving nearly **30% improvement** in predictive accuracy (F1 score) over the baseline
- presented my approach and results to members from **UNITAC, UN-Habitat Mexico** and a representative from **Guatemala City** showcasing an open-data approach to track progress towards UN SDG target 11.1.
- Created an **interactive web map** with model predictions and a **GitHub repository** for wider reproducibility

Repository link: github.com/jankomag/unitac-slums-model

### Auckland Urban Liveability Index

10/2022 - 05/2023,
**Leeds, UK**

Undergraduate dissertation project awarded the **Society for Location Analysis Undergraduate Student Award 2023;** pending journal publication
- developed a spatial composite indicator of **liveability**, and analysed its **relationships** with sociodemographic variables in Auckland
- created an **interactive web map** and comprehensive **GitHub repository** to enable **reproducibility**

Project link: jan.magnuszewski.com/auckland-urban-liveability-index

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## Languages

English (fluent)

French (basic)

Spanish (basic)

Korean (beginner)

Polish (native)

## Interests

Geospatial technologies

Data Science and AI

Smart Cities

Australasia

Melbourne

Listening to podcasts

Backpacking, hiking and travelling