

Richard Hargreaves

Geospatial Data • Digital Cartography



rjhcarto.github.io



@MappingAtoZ



Richard.Hargreaves@live.co.uk



07748774824

17 Southbourne Mansions
South Parade
Bath
Somerset
BA2 4AD
United Kingdom

I am a passionate Geospatial Developer with wide ranging spatial analysis and cartographic experience. My deep understanding of geospatial data, coding and visualisation has enabled me to focus on creating mapping products which are extensible, thoughtful and useful.

Experience

Living Map

October 2018 - Present

During my time at Living Map I have been responsible for the successful delivery of client lead projects and R&D solutions moving our products forward into the market. My technical focus has been the development of **SQL, Python, Cloud scripted services** with the common theme of geospatial data. Highlights include:

- Contribution to the initial design and continual development of a version controlled relational geospatial **Postgres/PostGIS** database with extensibility at its core. Forming the bedrock of our products, allowing the business to move away from irregular project specific legacy databases towards a **standardised** approach and having significant time savings on our project deployment and management.
- Being responsible for the bespoke creation, programming and management of routing networks and algorithms using **pgRouting** and **GDAL** for a variety of flagship projects for world renowned airports and shopping malls. This has underpinned the development of our indoor location product.
- Using open **geodata and architecture** to initiate the development of our OSM server. This encompassed the creation of data ingestion scripts, uses of cloud solutions, **docker** and the careful and considered cartographic representation of **vector tiles**. Giving me full exposure to the use of geographic data for large scale processes and enabling the offering of self service mapping for the business.
- Influence and advice on the cartographic principles of our maps. Bringing our digital map styling to a point where we are meeting cartography standards and innovating along the way, whilst juggling the problem of an abundance of data and the useful representation of this to the user.

The majority of development was incremental and iterative, following **agile methodologies**, mainly scrum and later kanban. This encouraged a fast paced cyclical approach to creating digital products and services within our multi-disciplinary team, **frequently keeping clients and key stakeholders involved** in the process.

Skills

Languages SQL, Python, R, Git & Javascript

Technologies QGIS, ArcGIS, GDAL, MapBox, Leaflet, Docker & GCP

Education

University College London - MSc Geographical Information Science, Distinction

2017 - 2018

Industry Dissertation with GeoXphere - Exploring the potential of 3D web mapping and analysis to support informed decision making in planning.

Notable units include:

- GIS principles & technology – Applying learnt analysis within QGIS, ArcGIS and Python to solve real problems.
- Principles of spatial analysis – The use and implementation of R statistical package for spatial analysis.
- Web and mobile GIS – Apps and programming, languages include HTML5, CSS, JavaScript.
- Spatio-temporal analysis and data mining – Techniques for big data mining and machine learning.
- Spatial databases and data management – Creation and management of data using SQL and NoSQL.
- Applied building information modelling – Capture and processing of 3D data for BIM, CAD and 3D GIS.
- Mapping science – Theory covering the general concepts and techniques of geomatics.
- Representations, structures and algorithms – Theory covering GIS data types and their manipulation.

University of Portsmouth - BSc (Hons) Geography, First Class

2014 - 2017

Dissertation - The Arctic reality versus NASA's MODIS Satellites: An overview of the Kevo Valley terrain, Finland.

Notable units include:

- Residential field class - Two week field trip to the Kevo Subarctic Research Institute, situated at the northernmost tip of Finland, within the Arctic Circle. While the second week was used for Level 5 unit work, the first week was used for the collection of spatial snow property data across the valley system, used for my dissertation, which was subsequently graded at a First Class mark.
- Cold environments - 10 day field trip to Mount Washington, New Hampshire. Daily fieldwork was carried out with temperature, wind and light transects set up across the mountain, as well as a visit to the summit. Here I have mapped wind speeds and averages across transects and the summit.

Interests

Making Maps

Outside of a professional context, I am passionate about creating maps. Both web and print, I'm really interested in taking geodata and telling a story. Conveying a message to an audience and making an impact through cartography. Some of my work can be seen on the instagram @MappingAtoZ.

Outdoors

I have a keen interest in rock climbing and mountaineering, during my time at Portsmouth was both a regular member and treasurer for the university club. As well as the weekly sport and social aspect of the club, we organised various trips throughout the year. These include outdoor climbing in the Peak District and mountaineering in Snowdonia. I also like to split my time with a new found love for surfing, which has driven my most recent project of converting an old panel van into a campervan for long weekends at the beach.