UNIVERSITY OF LINCOLN
JOB DESCRIPTION

JOB TITLE	Geospatial Analyst				
DEPARTMENT	LIRCH				
LOCATION	Lincoln Campuses				
JOB NUMBER	CHS202	GRADE	7	DATE	March 2025
REPORTS TO	Senior Research Software and Database Developer				

CONTEXT

The Lincoln Institute for Rural and Coastal Health (LIRCH) is the country's first integrated and multidisciplinary research institute dedicated to rural and coastal health research. LIRCH has been awarded £10.9 million funding from Research England's Expanding Excellence in England (E3) fund and is in the process of significant expansion. As part of this expansion, the University will recruit to over twenty research positions. A technical and professional services team will also be embedded within the Institute to support the research and develop a financially sustainable research Institute.

With this expanded capacity, the Institute will bring together multiple disciplines to produce impactful research helping to tackle the place-based inequalities experienced by rural, coastal, and remote communities. By co-designing and shaping the emerging discipline together with the next generation of researchers and affected communities, LIRCH aims to create the future academic and community leaders of rural and coastal health.

The postholder will support the LIRCH technical team following standard University guidelines and procedures as well as funder regulations. The postholder will work to enable the LIRCH academic and research team to source, generate, and interpret complex, place-based data sets to drive forwards the Institute's research agenda routed in rural and coastal health.

JOB PURPOSE

The University of Lincoln is significantly expanding its research in the growing specialism of rural and coastal health. There is a growing need for professional expertise in geospatial analytics and programming to guide and collaborate with academic researchers within the specialism.

The Geospatial Analyst is a professional, non-academic technical position responsible for geospatial data and system design development and management, collaboration and stakeholder management, and project and resource management. They will collaborate with world-leading researchers in the Lincoln Institute of Rural and Coastal Health (LIRCH). They will ensure effective analysis of spatial data to enable novel health and wellbeing research to be carried out more efficiently and reliably.

The postholder will liaise closely with researchers to understand their requirements and to implement excellent solutions. The role involves leading the development of new or existing

geospatial applications in the areas of rural and coastal health, the management of new geospatial projects, the management of relevant geospatial applications and managing the outputs of less experienced GIS roles. As such, the role presents an opportunity to actively participate in research, applying innovative theories the health outcomes of rural, coastal, and remote populations.

You will contribute to research in the field of coastal and rural health, and work with a team of interdisciplinary scientists, designing and conducting geospatial approaches to combine social and health data.

The post-holder will support and develop the technical remit of Geospatial research across the institute. We are seeking a candidate who:

- Has a strong academic profile related to GIS, spatial analysis, and health.
- Has experience of sourcing, manipulating, managing, analysing, and visualising spatial data.
- Has experience in combining and analysing large, independent datasets.
- Is experienced in conducting geospatial statistical analyses.
- Has a strong background in research design, who can work with interdisciplinary experts to guide and inform the spatial analysis of healthcare data.
- Can create effective maps and figures for community outreach, stakeholder engagement, and publication in high quality academic journals.
- Has a track record in securing external research funding and publishing in high quality peer-reviewed academic journals commensurate with career stage.

We would particularly welcome candidates with an established or emerging background in geospatial approaches to understanding relationships between health, rurality, and social deprivation. The post holder will work closely with the Institute's Senior Research Software and Database Developer and together the technical roles will supervise and develop geospatial work with academic researchers and postgraduate students.

General

- To undertake geospatial analysis of social, environmental, and health data.

- To consult with an interdisciplinary team on spatial research design.

- To create effective maps and figures for communities, stakeholders, and academic journal articles.

- To contribute to competitive bids to secure external research funding in the field of rural and coastal health.

- To write reports and manuscripts for communities, stakeholders, and high-quality academic journals.

- To carry out other activities in support of the academic work of the institute.

KEY RESPONSIBILITIES

Technical Proficiencies

- Expertise in Geographic Information System (GIS) and GeoSpatial Analysis.

- Demonstrable abilities in developing geospatial web applications using tools such as ArcGIS, QGIS JavaScript API, ArcGIS Runtime, OGC Services, and APIs

- Experienced and knowledge in working across multiple data sets and a range of data types, languages and systems, including nested mosaic data and open-source data.

- In-depth knowledge of Geospatially enabled databases and development of schema creation and table optimisation.

- Knowledge of the Open Geospatial Consortium – to be able to advise the Institute technical team and set the standard for data and GIS system requirements.

- Experienced in coding to support GIS application with collaboration with the Institutes technical team.

- Experience creating online open access data platforms.

Geospatial Analysis and Programming

- Provide mapping, analysis and visualisation support to LIRCH academic research across a wide range of health, wellbeing and environment projects.

- Handle sensitive data knowing how to correctly manage and set up long term storage and sharing agreements.

- Analysis of large multi data sets including health, economic, mental health and environment data to support the research impact and output of the Institute.

- Work collaboratively with the Software Development team to develop and implement GIS software solutions.

- Design and deliver robust, scalable and efficient GIS applications to scale up the research of the Institute.

- Conduct spatial analysis and create detailed maps and visualisations from multiple data sources in a variety of formats for internal and external publications.

- Ensure the accuracy and quality of all GIS data for the Institute.

Research and Scholarly Activity

- Make a contribution to the research profile of the Institute and pursue a personal research programme consistent with the Department's research priorities.

- Collaborate in research activities and initiatives with colleagues in and beyond the Institute if appropriate.

- Ensure that outcomes of research and scholarly activity are appropriately disseminated in peer reviewed outlets.

- Apply for grant funding and manage, as appropriate, any grants which are secured.

Liaison and Networking

- Establish contacts within the wider community where possible and begin to form relationships for future collaboration.

- Identify opportunities to contribute to research projects from inception to completion.

- Serve as the technical lead in cross disciplinary and cross-functional research projects, providing guidance on geospatial and data best practices.

- Liaise with the university's Digital Technologies department to effectively allocate resources and develop solutions.

- Initiate, develop relationships and liaise with internal and external collaborators, maintaining positive and effective working networks.

- Develop links with relevant professional bodies and academic groups.

- Develop involvement in academic activities with industry and other external partners.

- Take part in relevant internal committees and working groups.

Project and Research Planning

- Perform project management activities, planning, scheduling, monitoring and reporting on progress of GIS aspects of research projects.

- Manage the lifecycle of Geospatial projects, including planning, budgeting, risk management, prioritisation, resource allocation, and timelines.

- Oversee procurement and management of GIS software licenses, cloud resources, and data storage infrastructure.

- Lead, as appropriate, GIS development projects and direct junior analysists and programmers towards effective and efficient solution development.

- Ensure that all geospatial and data management processes are aligned with the institution's policies and research goals.

Internal Research Activities

- Participate in and help to organise internal research activities, including seminars, research meetings and conferences, in particular to contribute to training of researchers on aspects of software engineering and database management.

- Manage and mentor junior technical staff.

Citizenship
- Contribute to the wider mission and reputation of the University with active involvement in activities contributing to general university life.   - Active participation in committees/groups contributing to university life e.g. health and safety, equality diversity and inclusivity, sustainability and working groups.   - Engage in appropriate training programmes in the University, actively follow and promote University policies and participation in the staff appraisal scheme and yearly Individual Research Plan (IRP).   - Contribution to the future development of the University and support the University's wider social, cultural and economic development of our region, our 'civic' mission with engagement and/or leadership of external partnerships contributing to the civic mission of the University. Participation in external activities such as volunteering, school governor, cultural activities, community activities.

In addition to the above, undertake such duties as may reasonably be requested and that are commensurate with the nature and grade of the post.

ADDITIONAL INFORMATION

Key working relationships/networks	
Internal	**External**
- LIRCH Director - LIRCH academic staff and researchers - LIRCH Professional Services and Technical teams - LIRCH Senior Development Manager - Postgraduate students - Digital Technologies representatives - Other research, technical and academic staff - College Executive	- Research collaborators and partners. - Computing suppliers (e.g. high-performance computing, licenced software) - Sponsors and clients - UK Research Funding bodies - Other HEIs - Relevant Charities - Knowledge Exchange Networks - Regional and National partners in the Health and Care sector - Community representatives and groups - Government and local authority bodies

UNIVERSITY OF LINCOLN
PERSON SPECIFICATION

JOB TITLE	Geospatial Analyst	JOB NUMBER	CHS202

Section Criteria	Essential (E) or Desirable (D)	Where Evidenced Application (A) Interview (I) Presentation (P) References (R)
Qualifications:		
Qualification in GIS platforms such ArcGIS, QGIS, Spatial Programming R	E	A, I
Proficiency in Python C# or C++, knowledge SQL or HTML5/JavaScript	E	A, I
Experience:		
Ability to analyse and manipulate data within GIS and digital mapping environments.	E	A, I
Strong GIS data management skills, including digitising, data capture, and preparation of data schemas.	E	A, I
Experience working with multi-data sets eg, health and economic data and nested mosaic data	E	A, I
Open Source/Online Data GIS platform knowledge such as Leaflet or ArcGIS API or OS Data API	E	A, I
Comfortable working with UK datasets	E	A, I
Experience with GJSON libraries, data cleaning and handling big data such as netCDF (NC) files.	D	A, I
Experience working with large data sets within a research environment.	E	A, I
Ability to code for GIS applications adhering to global GIS standards	D	A
Experienced in Geomapping and GIS Programming for research purposes	E	A, I
Familiar with data ethics, GDPR and understanding complexities of health data plans and risks.	E	A, I
Familiar with global GIS standards such as OGC, WMS, WFS	D	A, I
Strong background in research design	D	A
Published in journal articles	D	A
Competencies and Personal Attributes:		
Flexible approach to workload	E	I
Ability to work on own and as part of a team	E	I
Enthusiasm and commitment to represent the research centres and promote them also externally	E	I
Serious commitment to GIS/ geospatial research and a strong attention to detail	E	I
Business Requirements:		
Travel between campuses as required	E	I

Essential Requirements are those, without which, a candidate would not be able to do the job. **Desirable Requirements** are those which would be useful for the post holder to possess and will be considered when more than one applicant meets the essential requirements.

Author	CS, AM, BH, HM, JA, AG	PBP	AH