



Lead Data Scientist

UKRI – NERC – BGS

Keyworth, Nottingham or the Lyell Centre, Edinburgh

£37,789 to £41,988 per annum (depending on qualifications and experience)

Full Time – 37 hours a week (a range of flexible working options may be available)

Permanent Appointment

About us

The British Geological Survey (BGS) is an applied geoscience research centre that is housed in UK Research and Innovation (UKRI) and affiliated to the Natural Environment Research Council (NERC). It is a world leading geological survey that provides a core science mission to inform government of science related to the subsurface and its interfaces and also undertakes applied research for solutions to earth and environmental processes, both in the UK and globally. It is funded directly by UKRI as well as through research grants and via private sector contracts.

BGS has an annual budget of approximately £60 million and employs 650 people. It has two main sites, a head office in Keyworth near Nottingham and the Lyell Centre, which is a joint collaboration with Heriot Watt University in Edinburgh. BGS works with more than 150 private sector organisations as well as having close links with 40 universities and sponsors approximately 100 PhD students each year.

About the role

We have an opportunity for a creative and motivated Lead Data Scientist to join our Digital team.

We would like you to play a leading role in developing and delivering insight from data using statistical and data science techniques for the benefit of geoscience and society. We would expect you to possess the technical (ICT) and numerical skills to be able to both mine and analyse data from BGS' vast data holdings as the National Geoscience Data Centre but also from social media and other organisation's research data (both Open and proprietary).

You would have a real opportunity to work with state of the art environmental data from sensor networks including those established as part of the pioneering UK Geoenergy Observatories (UKGEOS) research project which aims to establish world leading knowledge applicable to a wide range of energy technologies and inform future Government energy policy.

About you

You will have an in-depth knowledge of the current trends in Data Science including frameworks and/or workflows systems for advanced analytics and machine learning, or experience with ETL (extract, transform, and load) and building data pipelines. You will have experience with distributed (e.g. HPC clusters, Cloud Systems) and/or virtualised/containerised environments.



We would expect you to have experience in advanced information processing technologies and intelligent systems to support extracting knowledge from data and scientific discovery. In addition it would be desirable to have experience working with linked data, semantic web and ontologies.

You will be able to persuasively advocate the value of data science techniques to a range of technical, scientific and non-technical/scientific audiences. You will be able to design new ways of collecting and/or combining data (including spatial) from a variety of sources and understand how to manage and/or link this data. You will be able to extract meaning and knowledge from the data you analyse and/or develop innovative solutions and services from our data holdings.

You will be able to bring other BGS highly skilled scientific and technical staff into this understanding, making the data more widely useable. We are essentially looking for somebody who can tell stories from data that can be communicated to a wide range of audiences.

What we offer

A generous benefits package is offered, including a very competitive pension scheme, 30 days annual leave plus bank holidays and access to flexi-time.

Please note that any internal BGS staff applying for this post would, if successful, be appointed to new UKRI Terms and Conditions and pay.

How to Apply

Applicants are required to include a cover letter outlining their suitability for this role. We would stress the importance of this paperwork in our selection process. **A well thought through application addressing the advertised essential and desirable criteria for the post will be considered far more favourably than a generic covering letter and CV.**

Applications are being handled by UK Shared Business Services, to apply please visit our job board at http://www.topcareer.jobs/Vacancy/irc247979_9036.aspx

Applicants who are unable to apply online should contact us by telephone on +44 (0)1793 867000.

Closing date for receipt of applications is **8 February 2019**.

BGS provides a range of flexible working options including flexible working patterns, compressed hours and home working so if you have a need for flexibility, please raise this in the recruitment process when your needs, balanced with the requirements of the role, will be fully considered.

UKRI values diversity and welcomes applications from all sections of the community. People with disabilities and those from ethnic minorities are currently under-represented and their applications are particularly welcome. There is a guaranteed Interview scheme for suitable candidates with disabilities.



The British Geological Survey is an Investors in People organisation and has achieved Bronze status for Athena SWAN – a scheme that recognises an organisation’s commitment and progress in developing a diverse and inclusive workforce.



Specific Skills Criteria		
	<i>Essential</i>	<i>Desirable</i>
QUALIFICATIONS	<ul style="list-style-type: none"> • Post graduate degree or equivalent work experience in Data Science, Artificial Intelligence (AI), Distributed Systems or a field strongly related to data science (e.g. computer science) 	<ul style="list-style-type: none"> • An MSc in Data Science, Data Analytics or AI • A Geology or environmental science qualification (e.g. A Level)
EXPERIENCE	<ul style="list-style-type: none"> • 3+ years postgraduate experience in the application of data mining and/or machine learning techniques against large datasets OR • 3+ years postgraduate experience of ETL (extract, transform, and load) and building data pipelines (e.g. supporting the build of data streaming system, writing ETL scripts and code to make sure the ETL process performs optimally, implementing data flows to connect operational systems and data for analytics) • 3+ years postgraduate experience working in a linux environment with HPC or Spark clusters (NB. BGS has access to local and national HPC clusters) • 2+ years’ experience in leading data science projects • Management/ Supervisory experience 	<ul style="list-style-type: none"> • 3+ years’ experience of knowledge extraction (e.g. semantic web, linked data, Natural Language Processing and ontologies) • Experience of working within an agile project team • Experience of writing about technical data science uses for a range of audiences. • Experience of working with time-series data. • Experience of commercial web software development (Using HTML, CSS, Java Script). • Experience conducting data science in order to assist with the creation of a full-stack web app. • Experience of data visualisation (i.e. RShiny, knitR, HTML, CSS)



KNOWLEDGE	<ul style="list-style-type: none"> • Good working knowledge of different code bases (Python, R, Matlab) • Good working knowledge of cluster computing frameworks (e.g. Apache Spark, Apache Flink) • Can demonstrate a clear understanding of data privacy and ethical considerations when applying data science. 	<ul style="list-style-type: none"> • Working knowledge of SQL, NoSQL and relational/non-relational databases • Working knowledge of Git • Understanding of containers and virtual machines
SKILLS AND ABILITIES	<ul style="list-style-type: none"> • Ability to quickly research and learn new programming tools and techniques • Ability to construct, present and communicate data science stories to both technical and non-technical audiences • Ability to work within a variety of teams, demonstrating an ability to lead teams and to participate as a team member • Ability to advocate Data Science to a wide range of people • Ability to work with limited supervision • Ability to adapt to change and work in a flexible manner • Ability to work with external clients/ stakeholders 	<ul style="list-style-type: none"> • Ability to coach or mentor other staff; to up-skill the wider BGS Informatics teams in the use of new technologies, principles and techniques
PERSONAL QUALITIES	<ul style="list-style-type: none"> • Able to express themselves clearly and concisely • Able to communicate effectively to both junior and senior members of staff • Approachable 	
MOTIVATION	<ul style="list-style-type: none"> • Demonstrates an interest in the work of BGS, NERC and UKRI • Displays an enthusiasm for their science / their role and a desire to develop this further 	<ul style="list-style-type: none"> • Willingness to travel and work overseas for short periods of time (weeks)



	<ul style="list-style-type: none">• Demonstrates curiosity and a drive to resolve scientific problems through Data Science techniques	
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