

UNIVERSITY OF LINCOLN JOB DESCRIPTION

JOB TITLE	Postdoctoral Research Fellow in Data Science and Control				
DEPARTMENT	College of Science				
LOCATION	Brayford, Lincoln				
JOB NUMBER	COS471	GRADE	7	DATE	May 2020
REPORTS TO	Founding Professor of Machine Learning				

CONTEXT
<p>We are looking for a highly skilled and experienced Postdoctoral Research Fellow in the area of data science and control with a particular focus on mining food and agricultural data within a large EU-funded project. The Postdoctoral Research Fellow will be a key player in the delivery of part of the EU-funded project 'Big Data and eco-innovative resource use in the NSR Greenhouse industry - greening the growth in horticultural production'. The post is based at the University of Lincoln, one of the partners of the project. The overall project aims to promote a forward leap towards a more robust, sustainable and energy efficient greenhouse production. The work at University of Lincoln aims to establish a Big Data analytics platform for scientific discoveries and advanced applications of data mining and machine learning to the various dimensions of resource usage in the North Sea Region (NSR) greenhouse industry.</p>

JOB PURPOSE

The Postdoctoral Research Fellow will work as part of a multidisciplinary research team with strong links to industry.

The Postdoctoral Research Fellow is responsible for conducting research on the project, as directed by the Principal Investigator and Co-Investigators, and is expected to operate with a significant degree of autonomy.

The post holder will have a leading role in the activity of data collection, related analysis and development of the Big Data analytics platform. The post holder may be required to help supervise the work of junior researchers.

KEY RESPONSIBILITIES

Literature Surveys
<ul style="list-style-type: none"> Undertake literature surveys and other state-of-the-art investigations. Prepare reports as required.
Programme of Research
Design and undertake programme of research under the direction of the Principal Investigator and co-Investigators, demonstrating a significant level of authority. Lead in the production of high quality research outputs, including reports, papers and other publications of international standing.
Project Management
Perform project management activities, planning, scheduling, monitoring and reporting on progress of research reports.
Liaison and Networking
Identify and liaise with internal and external collaborators, and with colleagues in the School and College, maintaining positive and effective working relationships.
Research Activities
<p>Participate actively in the research life of the School by taking part in seminars, research meetings and conferences.</p> <p>Represent the University of Lincoln at project meetings with external collaborators and at conferences and research seminars.</p>
Continuous Professional Development
Undertake continuous professional development activities.
Grant Applications
Contribute to the production of grant applications.
Teaching Support

Engage in teaching support activities, up to a maximum of six hours per week, possibly including leading a small number of units (no more than two per annum), where required. Aid in the supervision of postgraduate research students, where required.

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

Scope and dimensions of the role

The post holder will focus on the Big Data analytics platform (incl. activity of data collection, related analysis and platform development) for scientific discoveries and advanced applications of data mining and machine learning to the various dimensions of resource usage in the North Sea Region (NSR) greenhouse industry.

Key working relationships/networks

Internal	External
<ul style="list-style-type: none"> • Project Principal Investigator • Project Co-investigators • Head of School • Other research and academic staff within the School 	<ul style="list-style-type: none"> • Lead Project Manager • Research Project Collaborators • Research Project Consultants

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PERSON SPECIFICATION**

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Selection Criteria	Essential (E) or Desirable (D)	Where Evidenced Application (A) Interview (I) Presentation (P) References (R)
Qualifications:		
Good honours degree (or equivalent) in Computer Science or in Engineering or in a relevant analytical subject	E	A
PhD in Computer Science or in Engineering or in a relevant subject area (or equivalent industrial experience). Good candidates may be accepted with a PhD pending, subject to publication record	E	A
Experience:		
Experience in data science and machine learning-related subjects, and in any of the following: data analysis, software development, data-driven control.	E	A/I
Cloud computing (e.g. Amazon Web Services, Databricks)	D	A/I
Extensive experience of relevant research methods	D	A/I
Authorship of research outputs of national/international standing	E	A/I
Experience of research in specific project area	E	A/I
Teaching support	D	A/I
Skills and Knowledge:		
Ability to design, conduct and project manage original research in the subject area	E	A/I
Good knowledge on data mining and machine learning-related algorithms	E	A/I
Good skills and experience in programming languages and software tools such as Matlab/Simulink, Python, C, SQL/NoSQL and related data mining/processing and analysis	E	A/I
Data transformation and processing in different environments and formats	D	A/I
Excellent written communication, including the ability to write reports and research outputs	E	A/I
Ability to prioritise own workload and work to specified deadlines under pressure	E	A/I
Ability to communicate complex subjects orally	E	A/I



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Ability to collaborate with a wide range of multidisciplinary partners	D	A/I
Competencies and Personal Attributes:		
Flexible approach to workload	E	I
Ability to work on own and as part of a team	E	I
Ability to learn and work in new technologies in a short time span	E	I
Enthusiasm and commitment	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		HRBA	SP
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