



**UNIVERSITY OF LINCOLN
JOB DESCRIPTION**

JOB TITLE	Post-Doctoral Research Associate				
DEPARTMENT	School of Chemistry, College of Health and Science				
LOCATION	Lincoln Campuses				
JOB NUMBER	CHS096	GRADE	7	DATE	February 2024
REPORTS TO	Dr Hanieh Yaghootkar				

CONTEXT

A Post-Doctoral Research Associate (PDRA) position has become available in the research group of Dr Hanieh Yaghootkar at the University of Lincoln.

We are seeking a highly motivated and enthusiastic PDRA to join our team and contribute to a cutting-edge research project funded by Diabetes UK. This exciting project will involve the application of machine learning techniques, advanced statistical methods, and data science approaches in genetics and precision medicine. The successful candidate will collaborate with a diverse, international team to lead research projects integrating genetics, metabolic biomarkers, and data from MRI scans of body composition to unveil obesity subtypes. Investigate their connections to type 2 diabetes, heart disease, hypertension, and various cardiometabolic and non-cardiometabolic conditions. Your goal is to predict risk profiles and responses to diverse weight management interventions, contributing to the advancement of precision medicine in obesity care.

You will have, or will soon obtain, a PhD in computer science, statistical genetics, data science or a related field. You will have previous experience of dealing with large data sets. This include knowledge of coding in Linux, R, python or similar programming language.

We are strongly committed to equality and diversity, and to creating an inclusive working environment where all can thrive. We encourage applications from any interested candidate.

JOB PURPOSE

The Post-Doctoral Research Associate is responsible for conducting research on the project, as directed by the Principal Investigator, and is expected to operate with a significant degree of autonomy. They are not expected to operate as an independent researcher.

The post holder may be required to help supervise the work of more junior researchers.

KEY RESPONSIBILITIES

Key duties and responsibilities
<p>Conduct research in the field of genetic epidemiology, including genome-wide association studies, Mendelian randomization and precision medicine.</p> <p>Communicate research to non-specialist audiences as well as to scientists and clinicians in other disciplines.</p> <p>Disseminate the results at international and national conferences.</p> <p>Publish research in high impact factor journals.</p> <p>Contribute to application and attracting of external funding/grants.</p> <p>Conceive and design new projects, in line with the group's research focus.</p> <p>Supervise and help the junior members of the team.</p>
Programme of Research
<p>Undertake a programme of research under the direction of the Principal Investigator, demonstrating a significant level of autonomy.</p> <p>Lead in the production of high quality research outputs, including reports, papers and other publications of national/international standing.</p>
Project Management
<p>Perform project management activities, planning, scheduling, monitoring and reporting on progress of research projects.</p>
Liaison and Networking
<p>Identify and liaise with internal and external collaborators, and with colleagues in the Department, maintaining positive and effective working relationships.</p>
Continuous Professional Development
<p>Undertake continuous professional development activities.</p>
Grant Applications
<p>Contribute to the production of grant applications.</p>
Effective Behaviours
<p>Timelines Meeting Deadlines Communication and Networking Ability to negotiate and influence Ability to plan and organise own workload Ability to adapt to a flexible approach to the demands of a busy college/department in order to accommodate changes in priorities when required</p>

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 successful candidate will develop their skills and knowledge in a range of areas of health data science and associated analytical methods. There will be opportunities to write up their results for publication, and to present their work at leading national and international conferences.

Key working relationships/networks

Internal	External
<ul style="list-style-type: none">• Principal Investigator• Other research, technical and academic staff within the school• Undergraduate and postgraduate students	<ul style="list-style-type: none">• Research collaborators



**UNIVERSITY OF LINCOLN
PERSON SPECIFICATION**

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Selection Criteria	Essential (E) or Desirable (D)	Where Evidenced Application (A) Interview (I) Presentation (P) References (R)
Qualifications:		
PhD or equivalent PhD in computer science, machine learning, genetic epidemiology, statistical genetics, data science or a related field (good candidates may be accepted with a PhD pending, subject to publication record)	D	A
Extensive knowledge specific to project/area	E	A/I
Experience:		
Prior experience of applying machine learning techniques in human health / biological data	D	A/I
Prior experience of working with big genomic data, the UK Biobank study etc	D	A/I
Authorship of research outputs of national/international standing	E	A/I
Skills and Knowledge:		
Ability to design, conduct and project manage original research in the subject area	E	A/I
Excellent written communication, including the ability to write reports and research outputs	E	A/I
Statistical skills and experience in analysing data, interpreting results, and concisely summarizing key messages.	E	A/I
Genetics skills and knowledge in how to use and interpret data from genome wide association studies; knowledge of Mendelian Randomisation would be an advantage.	D	A/I
Strong computational background and expertise in dealing with large data sets. This include knowledge of coding in Linux, R, python or similar programming language.	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
Skills specific to data mining, machine learning, AI	E	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
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	Hanieh Yaghootkar	PBP	AH
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