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| Last updated: | December 2024 |

**JOB DESCRIPTION**

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| Post title: | **Data Scientist** | | |
| School/Department: | NIHR Evaluations, Trials and Studies Co-ordinating Centre (NETSCC), School for Healthcare Enterprise and Innovation | | |
| Faculty: | Medicine | | |
| Career Pathway: | Management, Specialist and Administrative (MSA) | Level: | 4 |
| \*ERE category: | n/a | | |
| Posts responsible to: | Senior Data Scientist | | |
| Posts responsible for: | N/A | | |
| Post base: | Office-based- Hybrid Working Options Available | | |

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| Job purpose |
| This role will focus on the hands-on development, testing, and deployment of machine learning models to advance NETSCC’s data science capabilities. The role supports the organisation's goals of improving operational efficiency, delivering actionable insights, and fostering innovation. Collaborating with the Senior Data Scientist, the post holder will ensure the operational delivery of data-driven projects, contributing to organisational excellence. |

| Key accountabilities/primary responsibilities | | % Time |
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|  | To be responsible for provision of specialist advice to aid management decisions and provide support services in relation to data science capabilities to both internal and external customers  Clean, process, and prepare structured and unstructured data for analysis and model training.  Design, build, test, and deploy machine learning models to address business challenges, such as text classification and summarisation. | 30 % |
|  | To contribute to business wide projects using specialist knowledge and/or lead short-term projects within own department.  Collaborate with the Senior Data Scientist to ensure adherence to organisational best practices in model development and deployment.  Integrate machine learning models into existing infrastructure for use in batch processing or as APIs.  Support the development of data pipelines to improve data accessibility for analysis. | 20% |
|  | To carry out detailed assessment and analysis of issues and problems, using specialist knowledge to identify and recommend appropriate solutions.  Monitor, maintain, and update deployed models to ensure continued performance and relevance.  Create clear and reproducible documentation for all development work | 15% |
|  | Generate reports and visualisations to effectively communicate findings to both technical and non-technical stakeholders | 10% |
|  | To attend internal and external meetings to ensure that departmental issues are appropriately represented and reported. Contribute to the dissemination of data science capabilities through cross-departmental collaboration. | 10% |
|  | Horizon scanning of developments in machine learning techniques, tools, and industry best practices to support continuous improvement. | 10% |
|  | Any other duties as allocated by the line manager following consultation with the post holder. | 5% |

| Internal and external relationships |
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| Collaborate with colleagues within NETSCC, the School of Healthcare Enterprise and Innovation and the University, and the National Institute for Health and Care Research (NIHR). |

| Special Requirements |
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| Post holder may be required to undertake planned UK and International travel to attend meetings, events or conferences with occasional overnight stays. |

**PERSON SPECIFICATION**

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| Criteria | Essential | Desirable | How to be assessed |
| Qualifications, knowledge and experience | Skill level equivalent to achievement of HND, Degree, NVQ4 or basic professional qualification in mathematics, data science, computer science, Engineering or a related discipline.  Proven experience of planning and progressing work activities within broad professional guidelines and/or broad organisational policy.  Understanding of how the specialist services provided by the post-holder support the objectives of the business.  Able to apply an awareness of principles and trends in a specialist field and an awareness of how this affects activities in the business.  Strong experience with Python (preferred) or R for machine learning and data science, using libraries such as pandas, scikit-learn, PyTorch, or TensorFlow.  Experience of delivering machine learning models, with exposure to NLP models being a plus.  Proficiency in SQL for data extraction and transformation.  Familiarity with model deployment tools or platforms (e.g., REST APIs, batch pipelines). | Knowledge of cloud platforms like GCP, AWS, or Azure.  Understanding of NLP tools such as Hugging Face or SpaCy.  Experience with data visualisation tools or libraries (e.g., Matplotlib, Power BI).  Awareness of MLOps principles (CI/CD, model governance).  Exposure to model tracking and versioning tools (e.g., MLflow). |  |
| Planning and organising | Able to seek opportunities to progress a broad range of activities within professional guidelines and in support of business policy. | Experience of successful project management. |  |
| Problem solving and initiative | Able to develop understanding of long-standing and complex problems and to apply professional knowledge and experience to solve them.  Proven ability to deliver on deadlines with a practical, solution-oriented mindset. |  |  |
| Management and teamwork | Able to proactively work with colleagues in other work areas to achieve outcomes.  Able to delegate effectively, understanding the strengths and weaknesses of team members to build effective teamwork.  Experience working in a collaborative, Agile environment | Experience of successfully managing and developing staff. |  |
| Communicating and influencing | Able to provide accurate and timely specialist guidance on complex issues.  Able to use influencing and negotiating skills to develop understanding and gain co-operation.  Able to document processes clearly and present findings effectively for both technical and non-technical audiences. |  |  |
| Other skills and behaviours | Demonstrate behaviour that is consistent with the HEI values: Collaboration, Delivery, Knowledge and Excellence.  Demonstrate flexibility in approach to work and professional interest in the work of NETSCC |  |  |
| Special requirements | Occasional requirement to work and stay away from Southampton |  |  |

**JOB HAZARD ANALYSIS**

**Is this an office-based post?**

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| Yes | If this post is an office-based job with routine office hazards (eg: use of VDU), no further information needs to be supplied. Do not complete the section below. |
| No | If this post is not office-based or has some hazards other than routine office (eg: more than use of VDU) please complete the analysis below.  Hiring managers are asked to complete this section as accurately as possible to ensure the safety of the post-holder. |

## - HR will send a full PEHQ to all applicants for this position. Please note, if full health clearance is required for a role, this will apply to all individuals, including existing members of staff.

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| **ENVIRONMENTAL EXPOSURES** | **Occasionally**  (<30% of time) | **Frequently**  (30-60% of time) | **Constantly**  (> 60% of time) |
| Outside work |  |  |  |
| Extremes of temperature (eg: fridge/ furnace) |  |  |  |
| ## Potential for exposure to body fluids |  |  |  |
| ## Noise (greater than 80 dba - 8 hrs twa) |  |  |  |
| ## Exposure to hazardous substances (eg: solvents, liquids, dust, fumes, biohazards). Specify below: |  |  |  |
| Frequent hand washing |  |  |  |
| Ionising radiation |  |  |  |
| **EQUIPMENT/TOOLS/MACHINES USED** | | | |
| ## Food handling |  |  |  |
| ## Driving university vehicles(eg: car/van/LGV/PCV) |  |  |  |
| ## Use of latex gloves (prohibited unless specific clinical necessity) |  |  |  |
| ## Vibrating tools (eg: strimmers, hammer drill, lawnmowers) |  |  |  |
| **PHYSICAL ABILITIES** | | | |
| Load manual handling |  |  |  |
| Repetitive crouching/kneeling/stooping |  |  |  |
| Repetitive pulling/pushing |  |  |  |
| Repetitive lifting |  |  |  |
| Standing for prolonged periods |  |  |  |
| Repetitive climbing (ie: steps, stools, ladders, stairs) |  |  |  |
| Fine motor grips (eg: pipetting) |  |  |  |
| Gross motor grips |  |  |  |
| Repetitive reaching below shoulder height |  |  |  |
| Repetitive reaching at shoulder height |  |  |  |
| Repetitive reaching above shoulder height |  |  |  |
| **PSYCHOSOCIAL ISSUES** | | | |
| Face to face contact with public |  |  |  |
| Lone working |  |  |  |
| ## Shift work/night work/on call duties |  |  |  |