JOB DESCRIPTION

JOB DETAILS

Job Title: **Senior Data Scientist**

Band: 7

Team: Analytics, Data Science and Statistics

Department: Clinical Outcomes and Data Unit

Division: Digital Services

Base: **Hybrid working**
Any Christie NHS Foundation Trust site
Nominal base will be main site: 550 Wilmslow,
Manchester, M20 4BX

ORGANISATIONAL ARRANGEMENTS

Accountable to: Line manager – Lead Data Scientist

Other Accountabilities: Head of Analytics

Responsible for: Supporting the Data Scientists
The post holder may be required to line manage as
appropriate

JOB PURPOSE

This is an exciting opportunity to join The Christie's Clinical Outcomes and Data Unit (CODU) as a Data Scientist. The CODU's strategy is to improve patient outcomes through the robust selection, analysis, and visualisation of data. We work closely with colleagues across the trust to support the use of data in clinical and operational decision making. We are experts in data visualisation, creating data analysis tools, and helping colleagues to use these tools in their daily work.

You will be expected to work with the Analysts, Data Scientists and Statisticians within the team, working on projects with stakeholders throughout the Christie,

extracting insights from data collected throughout the hospital to be presented back to clinical and operational teams to inform improvements in the hospital.

With your organised, enthusiastic and inquisitive approach you will be able to work to tight deadlines, be a good multitasker and have a mindset for exploring data, responding to the requirements of stakeholders, ensuring the work is completed to agreed timescales and Trust requirements.

You will interpret information from many systems throughout the Trust, being one of the team's data experts, providing advice on the best approaches for data projects and explaining analysis performed to non-data experts in an approachable and easy to understand way.

DUTIES AND RESPONSIBILITIES

General

1. To support clinicians, researchers and non clinical staff in performing statistical analysis and producing data models

2. To lead on and manage statistical and data science projects with clinicians, researchers and non clinical staff and guide the input of team members in projects

3. To use data and technical analysis to extract insight from data for clinical and operational purposes, identifying solutions, recommending process and business rule improvements

4. To interpret statistical results and explain them, verbally and in writing, so as to be understood by non-statisticians

5. To advise on the appropriate techniques for data analysis and interpretation, advising analysts when data science and statistical work feasible

6. To identify and recommend improvements in reporting, software or other systems, which contribute to the performance of the systems or accuracy of data

7. To utilise explorative data science techniques to extract usable insights from data and explain data-driven recommendations to others through clear visualisations

8. To explore and stay up-to-date with various modelling techniques, advising on those optimal for the purpose

9. To ensure selected techniques remain to be fit for purpose through on going monitoring and robust data pipelines

10. To plan own workload and projects appropriately

11. To test own work and peer-review team member's work

12. To support the learning of team colleagues and mentor junior team members

13. To create and maintain documentation on analysis undertaken for the creation of tools and reports for CODU projects

14. Any other duties commensurate with the post and grade that may be requested by the Lead Data Scientist

Communication and Relationships

1. Communicate professionally with senior clinicians and service managers. This may require the use of specific clinical terminology to understand issues being raised in detail.

2. Represent the Clinical Outcomes and Data Unit and Digital Services as appropriate in internal and external meetings, reporting back on progress. The post holder must be able to travel and be sufficiently confident to forge effective working relationships with partner organisations as required.

3. Advise, support and lead on reporting at appropriate directorate, divisional and Trust level meetings.

4. Be a point of contact for CODU, managing queries, problems, requests, and incidents ensuring they are logged and tracked.

5. Lead, manage and action the resolution of assigned tasks in an efficient and professional manner. Post holder must conform to Trust and departmental procedures and working practices, seeking further advice and information when necessary.

Knowledge, training and experience

1. Post holder must be adept at researching and understanding complex, multi-departmental clinical data flows, and apply advanced levels of understanding of specialty specific data.

2. Expert at understanding problems and utilising various software to provide data insight tools using appropriate analytical techniques.

3. An exceptional attention to detail, ensuring high quality and efficient new processes are implemented.

4. Work closely with other teams in digital services (software development, data engineering) to understand cross over in work streams, and potential implications.

5. Support the highly important requirements of the performance management and income teams. Post holder should have an awareness of NHS financial and performance reporting.

6. Be continuously aware of changes to working practices for colleagues across the trust. Ensure that products are amended to reflect these changes, and meet expectations of stakeholders.

Analytical

1. Apply statistical and analytical knowledge to critically appraise and challenge the results of outputs ensuring only meaningful information is delivered to the clinical/business stakeholders.

Responsibility – policy and service

1. Act as an ambassador for the CODU by developing and maintaining excellent working relationships with users across the organisation, delivering against local requirements and national targets.

2. Lead in the development and maintenance of a culture of service provision and continuous improvement for own areas.

3. Be responsible for implementing policies for own work area and for proposing changes to policies, in line with legislation, Trust and NHS policies and guidelines across the Trust, where appropriate.

4. Pro-actively participate in ensuring that services delivered within the Trust reflect best practice with respect to organisational, NHS and legislative requirements and guidelines including IT Infrastructure Library (ITIL), Data Protection Act (1998), Information Standards, Information Security and compliance with NHS Information Governance.

5. Participate in Information Governance and security as required and ensure appropriate governance and security in own area.

6. Ensure change management is applied in own areas and follows implemented policies and procedures.

7. Ensure all documentation relating to own area of work is complete and fit for purpose.

8. Participate in Root Cause Analysis (RCA) for allocated incidents and problems; instigating emergency action, when required, liaising with other Trust Managers, as appropriate.

Responsibility - Staff/HR/leadership training

1. Responsible for line management of own team in line with appropriate policies, procedures, working practices and guidelines, ensuring all resources are deployed to maximise an efficient and effective delivery of support services to patients and users.

2. Provide regular performance reports on progress, status and achievements for own area to be used by management and users.

3. Undertake and support the development of staff in line with personal development reviews and other associated guidance.

Responsibility – finance and physical

1. Be responsible for the safe use of ICT hardware and software.

2. Monitor the maintenance and support contracts allocated to own area, ensuring continuity of service and budget management. Liaise with third party suppliers to identify and evaluate potential value for money contracts.

3. Liaise with external agencies, suppliers and contractors ensuring delivery of service is in line with agreed contracts.

4. Support business appraisals and business case production when required in partnership with Trust stake holders. Undertake solution searches and appraisals of supplier proposals.

5. Ensure Trust procurement processes and procedures are followed in a timely and efficient manner and participate in the procurement process where relevant, providing assistance for the development and assessment of procurement documentation as required.

6. Ensure Trust Standing Financial Instructions (SFIs) and procurement guidelines are followed and adhered to.

Project Management

1. Advise and participate in the development and implementation of projects, where required, ensuring Informatics provision of integrated solutions and user objectives are achieved.

2. Ensure project tasks, where required, are successfully delivered in line with agreed timescales and budgets.

3. Support the activities of project boards and project teams, when required, and making presentations, where required, to all levels of staff.

4. Ensure any project management documentation or reports are delivered in line with agreed standards and timescales.

Business Continuity Management

1. Participate in the development, exercising, maintaining and reviewing of business continuity plans. Participate the business impact analysis exercises highlighting critical business processes within own area.

2. Be familiar with the Trust Business Continuity Plan and personal responsibilities within where applicable.

Date Prepared: 23/03/23
Prepared By: Lauren Scanlon

Agreed By:
Employee's Name and Signature: Date:
Manager's Name and Signature: Date:

Date Reviewed:
Reviewed By:

PERSON SPECIFICATION

Job Title: **Senior Data Scientist**

	ESSENTIAL	**DESIRABLE**	**METHOD OF ASSESSMENT**
QUALIFICATIONS	Master's degree in an analytical/statistics/data science discipline or demonstrable equivalent experience		Certificates Application Form
EXPERIENCE	Experience of using programming languages and statistical packages to solve problems using data e.g. Python, R, Stata Experience of developing machine learning tools to extract insights and provide recommendations from data Experience as a professional statistician/data scientist Experience of utilising appropriate statistical techniques to extract insights and provide recommendations from data Experience working with analytical professionals, senior managers and a multidisciplinary environment on the publication, development and use of clinical data Experience leading projects with multiple stakeholders Experience of the use and management of Information within the NHS, academic or pharmaceutical community Extensive experience with Microsoft Word, Excel, PowerPoint, and Outlook Experience of documenting results for publication Experience of successfully managing a number of equally important tasks successfully	Experience of work in a healthcare setting	Application Form Interview

SKILLS	Technical skills in data manipulation, statistics, machine learning, programming and data visualisation.		Application Form
			Interview
	Ability to communicate complex system and technical issues to a variety of staff at different levels within an organisation		
	Excellent communication skills – verbal, written, presentational and interpersonal		
	Ability to clearly explain statistical methods and/or results to audiences of non-statisticians.		
	Ability to interpret the working practices of others and manage the introduction of new ways of working to improve service delivery creating documentation and policies as required		
	Ability to liaise across IT disciplines ensuring common objectives are delivered		
	Good organisational skills including time management, record keeping and paying attention to detail		
	Able to work to deadlines, prioritise and manage workload in a busy and changing environment		
	Flexible, positive, resilient, methodical, team player		
	Ability to work under pressure		
	Able to confidently converse with senior clinicians, using specialised clinical terminology as required, to understand issues being raised in detail.		
	Able to objectively analyse, evaluate and interpret information from a variety of sources		

KNOWLEDGE	Knowledge of a wide range of statistical, data science and machine learning techniques, including techniques to determine the appropriate tool for a given scenario Knowledge of a range of visualisations, including determining the appropriate visualisation for a given scenario Knowledge of data structures and data quality methodologies Knowledge of population based statistics Knowledge of research methodologies	Knowledge of hospital services and how services interlink Knowledge of the working practices used within the Trust, e.g. Inpatients, Outpatients, Medical Records and Medical Secretaries Knowledge of Oncology at disease group level Understanding of how services are commissioned within the NHS Knowledge of NHS England, Health & Social Care Information Centre (HSCIC) and Department of Health strategies, policies and guidance	Application Form Interview
VALUES	Collaborative Innovative Respectful Trustworthy Integrity Responsible		Application Form Interview
OTHER (*Please Specify*)	Evidence of continuing professional and personal development demonstrating a keen interest in data. Office based role with the need for travel to Christie managed sites or partners as necessary Ability to travel to relevant professional conferences nationally/internationally Ability to participate with flexible working to meet deadlines		Application Form

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Agreed By:
Employee's Name and Signature: Date:
Manager's Name and Signature: Date:

Date Reviewed:
Reviewed By:

GENERAL STATEMENTS:

RISK MANAGEMENT
It is a standard element of the role and responsibility of all staff of the Trust that they fulfil a proactive role towards the management of risk in all of their actions. This entails the risk assessment of all situations, the taking of appropriate actions and reporting of all incidents, near misses and hazards.

RECORDS MANAGEMENT/DATA PROTECTION
As an employee of the Trust, you have a legal responsibility for all records (including patient health, financial, personal and administrative) that you gather or use as part of your work within the trust. The records may be paper, electronic, microfiche, audio or videotapes, x-ray images. You must consult your manager if you have any doubt as to the correct management of the records with which you work.

HEALTH AND SAFETY REQUIREMENTS
All employees of the Trust have a statutory duty of care for their own personal safety and that of others who may be affected by their acts or omissions. Employees are required to co-operate with management to enable the Trust to meet its own legal duties and to report any circumstances that may compromise the health, safety and welfare of those affected by the Trust undertakings.

CONFIDENTIALITY AND INFORMATION SECURITY
As a Trust employee you are required to uphold the confidentiality of all records held by the trust, whether patient records or trust information. This duty lasts indefinitely and will continue after you leave the trust employment.

All Information which identifies individuals in whatever form (paper/pictures, electronic data/images or voice) is covered by the Data Protection Act 2018 and should be managed in accordance with this legislation.

SAFEGUARDING

All employees of The Christie NHS Foundation Trust have a responsibility to safeguard children, young people, and vulnerable adults, regardless of their role. Appropriate and proportionate actions/interventions should be undertaken, documented, and escalated promptly to the Safeguarding Team within normal working hours, or the Duty Manager out of hours. This includes making safeguarding referrals, risk assessments, and incident reports, in-line with roles and responsibilities.

TRUST POLICIES

The Trust operates a range of policies, e.g. Human Resources, Clinical Practice (available on the Trust intranet). All Trust employees must observe and adhere to the provisions outlined in these policies.