

## **JOB DESCRIPTION**

<b>Job Title</b>	: TVS SNSDE Data Engineer
<b>Base</b>	: Big Data Institute, Oxford
<b>Grade</b>	: Band 8a
<b>Hours of work</b>	: 37.5
<b>Directorate</b>	: Digital
<b>Responsible to</b>	: TVS SNSDE Senior Data Engineer
<b>Accountable to</b>	: TVS SNSDE Technical Lead
<b>Details of special conditions</b>	: 2-year fixed term contract

### **Job Summary:**

We are seeking experienced individuals with talent, expertise, and ambition in data engineering. We can offer the opportunity to work on innovative solutions that will transform scientific research and healthcare delivery in the NHS.

The successful candidates will work as part of the Thames Valley and Surrey (TVS) Sub National Secure Data Environment (SNSDE) Programme hosted by Oxford University Hospitals NHS Foundation Trust (OUH). They will contribute to the design and implementation of systems for data acquisition, integration, and analysis across a wide range of clinical systems and settings for this important national programme.

The tools and services they deliver will have a significant impact on the delivery of this programme. Working with academic and NHS colleagues across the Thames Valley and Surrey region, the post holders will have the satisfaction of seeing their software in use: improving patient care and supporting cutting-edge research.

### **Main Tasks and Responsibilities**

The successful candidates will provide expert services and advice across a range of digital areas, including systems, applications, data analysis, information reporting, information governance and information interpretation, investigate a range of highly complex data engineering issues, be responsible for strategic planning across a range of specialised areas and design, develop and adapt highly complex data engineering solutions.

Working as part of the OUH R&D Clinical Informatics team, the successful candidates will:

#### **Technical**

- Contribute to the design and development of software tools and data services that support collaborative, large-scale, data-driven health research.
- Work with clinicians, researchers, and other stakeholders to ensure that the design and development makes the best use of resources and reflects emerging priorities.
- Develop an excellent understanding of existing data architecture, and ensure that data flows and data assets are maintained or migrated where appropriate.

- Lead on deployment and comprehensive testing of data engineering systems and cloud-based infrastructures, such as MS Azure.
- Participate in scientific discussion and training, with regards to new data engineering technologies and clinical research applications.
- Participate in continuous delivery and systems integration, analysing data, preparing test data, troubleshooting issues and monitoring performance
- Identify issues and opportunities, and develop solutions to requirements independently and as part of the technical and wider programme team.
- Planning and monitoring the quality of their own work and that of the team through regular stand ups, pair programming, and quality assurance of others' work.
- Effectively communicate issues, solutions, and complex concepts to a range of audience types, and especially to members of the programme team and wider stakeholder groups.

**Management**

- Deliver training on a range of specialist data and informatics subjects, working to upskill new and existing staff members and other colleagues across the SNSDE network.
- Take on line management of junior data engineers as the team expands.
- Have financial responsibility for the identification, sourcing and purchase of required data management assets and supplies and will be responsible for the installation and maintenance of data management assets.
- Input into the development of deliverables for external data engineering supplier contracts and manage day to day activities of external contractors to ensure delivery within set timescales and budgets.
- Have responsibility for interpreting local and national policies as they apply to the programme and the network, and determining how to implement relevant policies to progress the development of the SNSDE service.
- Identify and propose changes to relevant policies and the development of the service as they arise, including those that may affect the whole network of SNSDEs or national policies and service expectations.
- Operate on an ongoing basis with minimum guidance, setting standards for others in the team and across the SNSDE network.

**Organisational**

- Maintain confidentiality of health and other operational data and compliance with relevant NHS, clinical, and information governance standards.
- Be accountable for professional conduct, complying with the trust's policies and procedures, and undertaking other duties as required by the Director.
- Be required to produce precise and accurate work, maintaining concentration for significant periods of time, with extended concentration required for complex problem solving, and be able to work with a moderate level of emotional effort that comes with working with real world patient data.
- Interpret technical/professional/administrative IM&T policies, advising the programme on how these should be interpreted, with an ongoing requirement to act with minimum guidelines setting standards for others.

### **Effort**

- Undertake periods of intense concentration when developing complex data engineering solutions. This can be continuous for up to 8 hours each day and is a significant aspect of the job.
- Require a high level of concentration when developing complex data engineering solutions, which may be subject to frequent interruptions to deal with queries, including providing advice to colleagues.
- Be able to work under pressure and meet ever changing priorities and deadlines.
- The post holder may be exposed to distressing/emotional circumstances, for example dealing with staff conflict, on an infrequent basis, or when working with patient data, on a moderately frequent basis.

## **General Conditions**

### **Risk Management**

The management of risk is the responsibility of everyone and will be achieved within a progressive, honest and open environment.

Staff will be provided with the necessary education, training and support to enable them to meet this responsibility.

Staff should be familiar with the

- Major Incident Policy
- Fire Policy
- Information governance

and should make themselves familiar with the 'local response' plan and **their** role within that response.

### **Responsibilities for Health and Safety**

The post holder is responsible for ensuring that all duties and responsibilities of this post are carried out in compliance with the Health & Safety at Work Act 1974, Statutory Regulations and Trust Policies and Procedures. This will be supported by the provision of training and specialist advice where required.

### **Infection Control**

Infection Control is everyone's responsibility. All staff, both clinical and non-clinical, are required to adhere to the Trusts' Infection Prevention and Control Policies and make every effort to maintain high standards of infection control at all times thereby reducing the burden of Healthcare Associated Infections including MRSA.

All staff employed by OUH have the following key responsibilities:

- Staff must wash their hands or use alcohol gel on entry and exit from all clinical areas and/or between each patient contact.
- Staff members have a duty to attend mandatory infection control training provided for them by the Trust.
- Staff members who develop an infection (other than common colds and illness) that may be transmittable to patients have a duty to contact Occupational Health.

### **Child Protection**

The post holder will endeavour at all times to uphold the rights of children and young people in accordance with the UN Convention Rights of the Child.



### **Safeguarding Children and Vulnerable Adults**

The Trust is committed to safeguarding children and vulnerable adults throughout the organisation. As a member of the trust there is a duty to assist in protecting patients and their families from any form of harm when they are vulnerable.

### **Information Governance**

All staff must complete annual information governance training. If you have a Trust email account this can be completed on-line, otherwise you must attend a classroom session. For further details, go to the Information Governance intranet site.

### **Data Quality**

Data quality is a vital element of every member of staff's job role. Oxford University Hospitals recognises the importance of information in the provision of patient care and in reporting on its performance. Data quality is therefore crucial in ensuring complete, timely and accurate information is available in support of patient care, clinical governance, performance management, service planning, and financial and resource planning and performance.

All staff should ensure that they have read and understood the Trust's Data Quality Policy.

## PERSON SPECIFICATION

**Job Title:** TVS SDE Data Engineer

	Essential	Desirable
<b>Qualifications</b>	In-depth knowledge of software engineering acquired through a combination of specialist training and relevant study (eg computer science, software engineering, mathematics) to Master's degree or equivalent level	Extensive, relevant professional experience may be considered against the requirement for a degree in computer science or a related discipline (the expectation of professional, technical competence is at least that associated with a degree level education in this subject).
<b>Experience</b>	<p>Excellent understanding of data engineering processes, models, data structures, and data formats (including JSON, SQL, and XML).</p> <p>Strong skills in relevant programming languages, frameworks, and platforms including <b>at least some of</b> JavaScript/TypeScript, Python, Angular/React, Spring, Java, Grails, Micronaut, and Spark.</p> <p>A strong track record of achievement in data engineering or software development.</p>	<p>Experience of working with sensitive or confidential data, such as financial information or patient records.</p> <p>Interest and/or experience in technologies relating to data science, for example: statistical analysis, machine learning, or natural language processing.</p> <p>Experience of agile development.</p>
<b>Analytical &amp; Judgemental Skills</b>	Ability to make judgements on multi-stranded or complex software engineering problems which may have no precedent or where there are conflicting opinions.	Demonstrable expertise in the field.
<b>Personal Skills</b>	<p>Excellent communication skills, both written and oral, and an enthusiastic approach to multi-disciplinary working</p> <p>Ability to lead development activities in specific areas, including collaborative development across organisations</p>	



**Oxford University Hospitals**

**NHS Foundation Trust**

<b>Behavioural Skills</b>	Aligned to the Trust values Always conducts themselves in a professional manner at all times Positive attitude to all tasks and stakeholders	Ability to work in the office several days a week, with some flexibility on home working
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