JOB DESCRIPTION

Job Title: Data Engineer

Pay Band: AfC 6

Hours: 37.5

Accountable To: Data Delivery Manager

Location: Hybrid from NHS Resolution London Offices

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| **Purpose** | The post holder is expected to fully understand, embrace and uphold NHS Resolution’s Purpose and Values:*“To provide expertise to the NHS on resolving concerns fairly, share learning for improvement and preserve resources for patient care.”* |
| Values | **Professional**Being an organisation which operates to the highest possible professional standards.**Expert**Being the centre of expertise for resolving claims, disputes and concerns about performance. **Ethical**Having high standards and doing the right thing.**Respectful**Dealing with customers, colleagues, patients and the public in a considerate and respectful way. |

## Organisation Chart



## Role Summary

* Support the Data Delivery Manager and Senior Data Engineers to develop the data platform on Azure, using T-SQL and ETL/ELT processes to maintain reporting base tables and views and build the pipelines that transform and deliver data to reporting, analytical and data science teams.
* Play a key role in the evolution of our data landscape as we move to a cloud-based data platform in Azure.
* Contribute to data quality endeavours, ensuring that data sources, warehouses, marts and pipelines provide a consistently high level of accuracy and reliability.
* Support on technical matters, including the complex data sets available to the organisation.
* Support the evolution of our data landscape as we move to a cloud-based data platform in Azure.
* Work closely with key stakeholders across the organisation to help shape their requirements and deliver valuable outputs.

## Role Responsibilities

Knowledge, training and experience

* Support the management of the data engineering (delivery infrastructure) for NHS Resolution including Azure SQL databases and the developing logical data warehouse.
* Assist in the ongoing performance of database objects (procedures, reporting views and base tables).
* Includes ability to use SQL Server Management Studio and Visual Studio. Experience using Azure Synapse would also be a benefit in this role.
* Develop and maintain database systems including the underlying design, ETL/ELT processes, understand data marts design and existing reporting layers.
* Contribute to the move to a modern data platform, utilising Microsoft’s Azure cloud-based assets to develop new data pipelines that move data elegantly between our core systems and endpoints for reporting, analysis and data science.
* Awareness of and some experience with the Microsoft Azure environment would be a benefit in this role, alongside any relevant Microsoft qualifications.
* Training and support will be provided to support the transfer of existing data engineering skills into the cloud.
* Participation in the organisation’s move to a new core system, including data model design and data migration.
* Build expert knowledge of the backend of case management systems used within NHS Resolution, as well as the underlying data sets.
* Review new datasets and data sources and assess implications for improving the delivery of the base reporting layer.
* Develop and maintain robust documentation of design and implementation.
* Maintain definition of processes for DE standards, guidelines and principles for all DE design and solutions within the organisation, and take on responsibility for their implementation.
* Develop and design functional testing for data delivery team developments
* Support business partners and the Data Science teams in UAT testing.
* Work with the IT team to plan and coordinate data engineering deployment and upgrade of data engineering tools.

### Analytical and Judgmental Skills

* Analyse, understand and interpret highly complex data from multiple sources, transforming it into a data model that supports reporting, data science and analytics, and NHS Business Partners.
* Building complex T-SQL code including the use of dynamic SQL to reduce the complexities from reporting layer used by Business Partners, Data Analyst and Data Science Team.
* Use Azure DevOps to ensure changes and development to the data engineering environments are carried out in line with internal frameworks and general best practice.
* Carry out periodic audits of the various complex database objects (views and procedures) to ensure that the delivery layer meets organizational reporting demands.
* Participate in scoping and understanding the transition of CRM migration between the current system and other systems the organisation is migrating to.
* Develop the organizational data mappings and data flows using specialist ERD tools and maintain organizational data catalogue using specialist tools
* Assist in understanding the data systems within the organisation.

### Communication

* Liaise with stakeholders to understand and manage their strategic data needs.
* Communicate with Business Partner Team and leads maintain a good communication channel establishing strong links to support developments.
* Assist other members of staff at NHS Resolution in understanding existing metadata and the business use cases on both regular and ad hoc circumstances.
* Support the promotion of the team’s role of the BI team by participating in the preparation of inductions, workshops, learning lunches and presentations with colleagues throughout the organisation.

### Planning and Organisational Skills

* Use Azure DevOps and Jira to manage and carry out tasks, to support individual workloads.
* Ensure changes and development to the data engineering databases are carried out in line with existing framework and best practice.
* Contribute to the production and maintenance of written guidance, policies, procedures and frequently asked questions (or similar documents) for internal and external use.
* Ensure thorough documentation of team Standard Operating Procedures and maintain a documented library of bespoke procedures, views and DDLs to ensure output can be audited and repeated as required.
* Contribute to long-term planning of NHSR’s data platform, ensuring we have a strong foundation on which to develop our Azure environment and migrate away from our on-premises SQL environment.

### Physical Skills

* A high level of technical capability is required, with accurate and swift keyboard usage required for all tasks.
* The ability to maintain a high level of concentration when working with large data sets, logs, maintenance plans and other complex resources.

### Policy and Service Development

* Ensure that high profile and complex data sources and views that inform parliamentary questions, FOIs, Policy questions and Subject Access Requests are developed maintained and communicated responsibly.
* Deliver the production of data and information to enable NHS Resolution to meet its legal obligations under the Freedom of Information Act (2000).
* Contribute and maintain in the production of written guidance, policies, procedures and frequently asked questions (or similar documents) for internal and external use.
* Use DevOps tools in tracking policy changes and version control.

### Develop Self, Others and Team

* Develop knowledge on potential new technologies (e.g. cloud solutions) and how they might be used in the organisation.
* Undertake necessary certifications as and when identified for the role.

## Key Working Relationships

### Internal

* Business Partners
* Technology & Operations team, particularly Architecture & Engineering
* Business Intelligence and Data Engineering colleagues

### External

* NHS Bodies
* Arms’ Length Bodies
* Other External Stakeholders
* Software suppliers

## Effort and Working Environment

### Physical Effort

* Office based post which requires the post holder to sit in a restricted position for the majority of the working day whilst undertaking analysis of data sets, writing reports, attending meetings etc; the post holder will be required to undertake light physical effort when carrying laptop and documents.

### Mental Effort

* Occasional prolonged concentration is required to undertake detailed analysis of complex data sets and producing reports. Flexibility is required due to the unpredictable interruptions from staff and stakeholders on a daily basis.

### Emotional Effort

* Occasional exposure to emotional or distressing circumstances when dealing with staff performance and disciplinary issues.

### Working Conditions

* Normal office conditions with a requirement to use a computer for the majority of the working day. The post holder will be required to travel to other NHS Resolution offices and, attend external meetings on an occasional basis via public transport.

## Further Information

1. The post holder must ensure that personal information for claimants, members of staff and all other individuals is accurate, up-to-date, kept secure and confidential at all times in compliance with the Data Protection Act/General Data Protection Regulations 2018 and the Common Law Duty of Confidentiality.
2. The post holder must follow the record keeping guidelines established by NHS Resolution to ensure compliance with the Freedom of Information Act 2000.
3. The post holder is expected to take responsibility for self-development on a continuous basis, undertaking on-the-job and other training as required.
4. The post holder is required to become familiar and comply with NHS Resolution’s policies and procedures.
5. The post holder must be aware of individual responsibilities under the Health and Safety at Work Act and identify and report, as necessary, any untoward accident, incident or potentially hazardous environment.
6. The post holder is expected to develop IT skills in data engineering and data base development solution and cloud solution and undertake necessary certifications.
7. The post holder may be required to undertake duties at any location within NHS Resolution, in order to meet service needs.
8. This job description and person specification are intended as a guide to the main responsibilities and profile of the post and not as an exhaustive list of duties and tasks. The post holder may be required to undertake other duties appropriate to the post’s grades, which are not listed above, at the direction of a manager. The job description may be amended from time to time after consultation with the post holder.
9. NHS Resolution operates No Smoking Policy and No Alcohol policies.

**PERSON SPECIFICATION**

| **Category** | **Criteria** | **Essential (E) Desirable (D)** | **How tested** |
| --- | --- | --- | --- |
| **Education & Qualifications** | Educated to Masters’ Degree level or equivalent relevant experience in database development and management | E | A & I |
| DP-203: Data Engineering on Microsoft Azure Certification | D | A & I |
| AZ-400: Designing and Implementing Microsoft DevOps Solutions Certification | D | A & I |
| **Skills & Abilities** | Ability to collate, analyse and interpret extremely complex data sources.  | E | A & I |
| Proven ability explain complex analytical methods to non-analytical people | E | A & I |
| Proven ability to manage multiple stakeholders  | E | A & I |
| Ability to identify underlying problems by analysing information and find effective solutions.  | E | A & I |
| Ability to manage a workflow and achieve short deadlines.  | E | A & I |
| Strong interpersonal and communication skills.  | E | A & I |
| Ability to work in an environment where there are frequent interruptions. | E | A & I |
| Ability to work autonomously on a day to day basis, to work within broad occupational policies and targets and meet with manager at regular intervals to discuss progress, issues or areas of concern.  | E | A & I |
| Ability to work effectively and collaboratively with other teams to improve ways of working. | E | A & I |
| **Experience** | Advance Level of MS Excel  | E | A, I & T |
| Intermediate Level of Word, Outlook, Visio and SharePoint | E | A & I |
| Experience of working with data warehouses or other complex relational databases | D | A & I |
| Experience of designing, developing and managing ETL Processes | D | A & I |
| Experience of using Power BI and creating reports/analyzing data using it. | D | A & I |
| Experience of working to tight deadlines.  | E | A & I |
| Extensive experience of analysing complex datasets effectively in a variety of settings | E | A & I |
| Experience of working with and combining data contained within different data sources | E | A & I |
| Extensive experience of complex SQL code to include development of scripts, functions, procedures, views and dynamic SQL. | E | A,I & T |
| Experience of maintaining database back end processes such as jobs, backups and linked servers | D | A & I |
| Experience of using and building Azure or other cloud-based solutions | D | A & I |
| Experience of supporting and enabling AI technologies through provision and maintenance of a suitable data model  | D | A & I |
| Experience of working with a range of internal and external stakeholders to better understand their data and reporting requirements | E | A & I |
| **Knowledge & Understanding** | Knowledge and understanding of confidentiality within the workplace (particularly within the NHS)  | E | A & I |
| Knowledge and understanding of Equality Act (2010) | E | A & I |
| Knowledge and understanding of Freedom of Information Act (2000) | E | A & I |
| Knowledge and understanding of Data Protection Act/General Data Protection Regulations (2018) | E | A & I |
| In depth specialist knowledge of statistical and information data analysis | D | A & I |
| **Other** | Ability to work collaboratively as part of a team and be sensitive to the characteristics of working in an open plan office environment | E | A & I |
| Commitment to own personal and continued professional development  | E | A & I |
| Self-motivated and confident approach | E | A & I |
| Confident with a high level of drive, enthusiasm and commitment | E | A & I |

\* A – application form; I – interview; T – test