

Senior Data Engineer

Reports to: Business Transformation Lead

Salary: £65,000 to £70,000 FTE, dependent on experience and meeting both essential and desirable person specification criteria

Hours: Full-time – some flexible working considered

BrisDoc is a forward-thinking social enterprise independently providing services to the NHS and serving over a million patients in the Bristol, South Gloucestershire and North Somerset areas. We provide a range of services including urgent care via 111 calls and out-of-hours services, primary care via two GP surgeries, and Bristol's Homeless Health Service.

As an employee-owned business, we are also part of a movement that believes in social value and in using its ethos and values to improve the healthcare services we offer and develop on behalf of the NHS. This translates into a passion for innovation and a focus on identifying and addressing social and health inequalities in the work and services that we deliver, ensuring we improve health outcomes for all. BrisDoc is a key integrator of services via technology platforms and co-location of multi-disciplinary teams, as a vital means of joining up services and improving the care that people receive. As we are also a provider of round-the-clock, round-the-year services, we collect a large amount of related data that places us in an invaluable position to understand and improve care services.

Working as part of BrisDoc's Business Transformation team, the Senior Data Engineer will take a lead role in developing and building our cloud architecture, data lake and warehousing, and data pipelines to support the organisation's service development and improvement. The role offers the opportunity to support innovation and transformation of vital daytime primary care services and out-of-hours urgent care services during an important time of change and development in NHS care, with a shift to more digitised, technological and data-driven services that support the delivery of excellent healthcare services.

The role will work across BrisDoc and its clinical, operational and back-office services, clearly and accurately defining business problems and solutions where data plays a crucial role.

Key Responsibilities

Data Engineering and Architecture

- In collaboration with the Head of Data, Digital and Technology and the Business Transformation Lead, to take the lead in developing BrisDoc's data engineering capability and supporting wider data and analytics activity, putting data-driven insight and decision-making tools at the heart of the organisation's mission to provide excellent, patient-centred care.
- To design, build and maintain scalable, automated data pipelines and infrastructure across BrisDoc's clinical, operational and back-office functions.
- To ensure data pipelines perform high quality extraction, transformation and loading (ETL) processes that prevent any data quality and record matching issues or overcome them for legacy data systems.
- To deliver innovative data solutions that migrate and standardise data from a range of different sources across BrisDoc to drive transformation and deliver organisational priorities, efficiencies and savings.
- To develop and support frameworks and processes to migrate legacy data systems to cloud-based platforms, addressing any problems or challenges identified.

Data Quality, Governance and Standards

- To be responsible for and ensure delivery of the highest standard of data quality, integrity and consistency across the organisation, ensuring appropriate data definition, cleaning, validation and monitoring processes are in place.
- To support best practices and standards in organisational data and information governance, security and compliance.
- Establish processes for, and participate in code reviews, testing and documentation to ensure the deployment of high-quality models and solutions.

Analytics and Machine Learning Support

- To support data analysis, data preparation, and feature engineering to identify trends and patterns.
- To support and contribute to the development, testing and deployment of statistical, algorithmic and machine learning models, including predictive and AI models, as part of identifying and deploying solutions to organisational data problems.
- To support the deployment and monitoring of machine learning models in service and operational environments.

Stakeholder Engagement and Continuous Improvement

- To collaborate with individuals and teams across BrisDoc, including business leads and stakeholders, BI and data colleagues to understand and address care, clinician, and business challenges in operational delivery and transformation.
- To communicate findings and recommendations to technical and non-technical stakeholders through clear reports, presentations and visualisations.
- To stay up to date with current industry trends and new technologies in the field of data engineering and data science.

Person Specification

Experience, knowledge and education

Essential

Education: At least an undergraduate degree in a quantitative field like mathematics, statistics, physics, computer science or data science; postgraduate degree preferred.

Programming: Strong proficiency in statistical and general-purpose programming languages, including Python (and R or similar languages desirable) and frameworks such as pandas (and tidyverse or similar packages for other languages desirable).

Cloud computing: Experience in working with cloud computing platforms and data services such as AWS and Azure for deploying and managing data infrastructure and analytic services.

Data warehousing: Good understanding of data warehousing, data lakes and best practices regarding data integration, storage and management.

Databases: Experience working with databases, including strong SQL skills.

Desirable

Data Science: Applied knowledge of data science methodologies and techniques, including proven experience in building and deploying predictive models and using applicable AI and machine learning tools.

Business intelligence tools: Experience of using tools like Tableau and Power BI.

Big Data Tools: Familiarity with big data tools (e.g., Hadoop, Spark, Hive).

NHS / Domain Knowledge: Knowledge of the health sector, NHS and the delivery of healthcare services in primary care and urgent care settings would be an asset but is not essential.

Skills and abilities

Essential

Communication: Excellent communication and presentation skills.

Problem-solving: Strong analytical and problem-solving skills.

Self-management and development: Ability to work under deadlines, take initiative, and continue to learn new technologies and methodologies in a self-directed way.

Data privacy and security: Good understanding of data privacy, security, and information governance.