

Lead Data Engineer

Job Level	5	Job Reference No:	
		Role Review Date	January 2022
Directorate	Fundraising & Supporter Engagement	Function	Business Intelligence & Analytics
Service	Supporter & Marketing Engagement	Reports to	Data Platform & Engineering Manager

Scale and scope of role

Direct Reports	None	Indirect reports	None
Budgetary responsibility/ accountability	£20k	Accountable for other resources	None

Context

We help anyone, anywhere in the UK and around the world, to get the support they need if crisis strikes: connecting human kindness with human crisis.

We enable vulnerable people in the UK and abroad prepare for and withstand emergencies in their own communities. And when the crisis is over, we help them to recover and move on with their lives.

We are part of the Red Cross and Red Crescent global humanitarian network.

Our Values and Principles

Our values (compassionate, courageous, inclusive and dynamic) underpin everything we do. As a member of the Red Cross and Red Crescent Movement, the British Red Cross is committed to, and bound by, its **fundamental principles**: humanity, impartiality, neutrality, independence, voluntary service, unity, and universality.

Purpose of the role

The Lead Data Engineer provides technical leadership around the design, development and delivery of the data warehouse, data processes, data products and services that make up the data platform and integrations required for the Fundraising and Supporter Engagement directorate. These data items vary from smaller proof-of-concepts through to production-ready data systems, but the focus always remains on benefit realisation. The role ensures that these solution designs and architecture deliver accurate, well understood data both to applications and to stakeholders. The Lead Data Engineer is a key technical point of contact for specialist CRM and Data Platform partners, internal stakeholders, and contracted resources

Key Responsibilities

Solution Design and Architecture

- Provide Supporter Data Platform subject matter expertise to the team and colleagues across the organisation.
- Influence and drive best-practice in solution designs, ensuring they meet business requirements and align with the Data Platform strategy, contributing to the organisation's strategic goals
- With expert knowledge, choose and implement the appropriate approach to architecting solution designs for the Fundraising and Supporter Engagement directorate
- Review technical and non-technical requirements and specifications, consult stakeholders, presenting solutions with options and detailed analysis enabling stakeholders to make informed decisions
- Analyse, evaluate, and document existing processes, systems, and information, identifying important features and aligning design scope with departmental and organisational strategy
- Support rapid discovery, prototyping and data analytics, that can subsequently be turned into production solutions

Service Delivery and Improvement

- Triage and impact-assess requirements to estimate timelines, resource needs, costs, and dependencies
- Manage and direct the end-to-end delivery of data platform projects with external agencies, from design and planning to development and deployment, effectively managing resources and project costs along the way
- Ensure effective processes are in place to capture and assess requirements, and ensure standards exist to guide how the work is done
- Create and manage appropriate solution artefacts complete with thorough and accurate documentation including appropriate metadata repositories
- Work in a matrix with other functions key to the successful deployment of solutions, including, but not limited to, Data, Digital and Technology (DDaT) colleagues responsible for infrastructure, software, and security; alongside Analytics & Insight and Data Delivery colleagues who rely on good quality, trusted data solutions

Functional Expertise

- Establish enterprise-scale data integration procedures across the data development lifecycle and ensure that teams adhere to these
- Produce data models demonstrating an understanding of the concepts and principles, work across BRCS to understand opportunities for re-use and alignment between the data models in different directorates
- Understand and help teams apply a range of techniques for data profiling and source system analysis from complex sources, bring multiple sources together in a conformed model for analysis

- Be responsible for monitoring Data Platform resource costs, ensuring BRC gets value for money from solutions, continually reviewing, assessing, and balancing costs against the business benefits delivered
- Review requirements, specifications and define test conditions, identify issues and risks associated with developments and analyse and report test activities and results
- Lead on the establishment of standards in line with industry best-practice and ensure they are kept up-to-date and adhered to

Technical Leadership

- Represent and present Data Platform solution designs to the relevant governing groups (i.e. the CRM+ Change Advisory Board and Design Authority Board; Data Governance Group)
- Proactively drive the implementation of the Data Platform vision and strategy
- Lead the selection of appropriate technologies to deliver reliable, scalable, and futureproofed data platform and data solutions
- Integrate and separate data feeds through the data development process, mapping, producing, transforming, and testing new data products
- Use agreed standards and tools to design, code, test, and document moderate to complex programs and scripts from agreed specifications, collaborate with others to review specifications
- Understand and apply security, accessibility and version control and use a range of coding tools and languages
- Proactively identify problems and issues with databases, data processes, data products and services, identifying them before they become serious – ensure the existence of performance monitoring, data quality, defect rates and other quality measures
- Lead investigations into problems, determining appropriate remedies and assisting with implementation of these as well as preventative measures

Coaching and Supervision

- Coach and mentor the team on the effective use of tools and programming languages such as T-SQL, Python and C#
- Proactively support the Business Intelligence & Analytics team with the Data Platform specifically in relation to reporting, analytics, marketing CRM, and wider data delivery processes
- Review non-data platform technical solution designs, when required, and ensure they are fit for purpose, supportable, performant, make appropriate use of technology and are robustly tested
- Identify training opportunities within the team and proactively create approaches to fill these gaps, analysing and evaluating their effectiveness

Team Member

- Actively participate in all team meetings
- Support other team members
- Work and behave in accordance with all BRC policies and procedures

- Uphold the fundamental principles of the Red Cross and acts with integrity, in accordance with the Society's values (inclusive, compassionate, courageous, and dynamic)

The duties and responsibilities described are not a comprehensive list and additional tasks may be assigned from time to time that are in line with the level of the role.

Pre- engagement checks

Criminal Records

Type of criminal record checks required for this role

England and Wales - Disclosure and Baring Service Check (DBS)
> None
Scotland
> None
Northern Ireland
> None

Drivers Checks

> Required - No

Diversity

At the British Red Cross, we are looking for the right people to help us provide support to millions of people affected by crisis. We want our team to reflect the diversity of the communities we serve, offering equal opportunities to everyone, regardless of, age, disability, gender reassignment, marriage and civil partnership, pregnancy and maternity, race, religion or belief, sex, or sexual orientation.

Diversity is something we celebrate, and we want you to be able to bring your authentic self to the British Red Cross. We want you to feel that you are in an inclusive environment, and a great position to help us spread the power of kindness.

Person Specification

		Requirement	Evidence obtained through Shortlisting (S) Interview (I) or Assessment (A)		
			S	I	A
			Knowledge and Skills	Essential	<ul style="list-style-type: none"> • Expert understanding of database technology with specific use when storing and manipulating large datasets (hundreds of millions of transactions) • Demonstrable understanding of how to expose from and to systems (for example, through APIs), link data from multiple systems and deliver streaming services • Excellent verbal and written communication skills with the ability to listen to the needs of technical and business stakeholders and interpret between them. • Able to manage stakeholders' expectations and be flexible, capable of proactive and reactive communication and facilitating difficult discussions within the team or with diverse senior stakeholders • A strong practical understanding of ETL principles and best practice for developments across projects with varying complex requirements as well as an in depth understanding of dimensional database design (such as Kimball) and data modelling • Extensive knowledge in different programming or scripting languages including: Advanced T-SQL, Spark SQL, Object oriented programming (such as PySpark/ Python (preferred) / C# .NET/ Scala/ R, Powershell) • Expertise in Big Data batch and streaming, ETL & Visualisation tools, e.g.Databricks, Delta tables, Azure Data Factory, Stream Analytics and Microsoft SQL Server Integration Services (SSIS) development skills, NoSQL databases, Power BI, Tableau, SAS, PowerPivot • Demonstrated knowledge of agile or other rapid application development methods, - including Azure DevOps, source control (such as Git repos) and build and release pipelines
Desirable	<ul style="list-style-type: none"> • A well-informed understanding of cloud services (platform as a service, infrastructure as a 	X		X	

		<p>service etc.) and how they can be utilised to support reporting and analytical requirements</p> <ul style="list-style-type: none"> • Skilled in supervising, coaching, and developing colleagues 		X	
Experience	Essential	<ul style="list-style-type: none"> • Proven experience of delivering end to end solutions, interpreting business requirements, creating solution designs, and creating and implementing technical solutions and technical documentation as a result • Proven experience of effectively managing projects, using the waterfall and agile approaches, prioritising, assigning, and managing tasks within the development team • Extensive experience developing ETL and ELT solutions using SQL Server Integration Studio, Azure databricks and Azure data factory, implementing/utilising Azure Key vault and security best practices between azure resources for data in transit and data at rest • Practical experience in the design and development of a Data Warehouse based on a dimensional data model and the subsequent management of the SQL Server/ Azure SQL databases, monitoring performance and supporting issues from identification through to resolution 	X	X	
			X	X	X
	Desirable	<ul style="list-style-type: none"> • Experience with transactional CRM systems and applications • Experience developing and deploying information solutions using Azure Dev Ops CI/CD build and release pipelines • Experience using statistical analysis and data mining tools (e.g., SAS Enterprise Miner, SPSS, R, Python) • Evidence of relevant professional training or continuous professional development 		X	
			X	X	

Behaviours	Embracing and leading change <u>Promotes and delivers significant change</u> – Delivers organisational change by recognising the strategic direction, identifying future needs, and providing explanations. Can effectively communicate the benefits of change, or respectfully and constructively challenge it, where appropriate.		X	
	Leading and engaging Builds team commitment and engagement -Delivers business objectives by providing direction, influence and motivation to people and teams		X	
	Solution focussed Constructs and customises solutions and makes plans – Supports solutions or proposes alternative solutions with rational, logical, and well thought out options. Finds different ways to construct and customise solutions, including finding and building on existing experience and good practice. Supports others to understand ways to balance critical and appreciative approaches		X	
	Working collaboratively Pro-actively builds collaborative relationships internally and externally - Manages relationships and partnerships for the long term – sharing insights, building trust, constructively and openly tackling conflict in order to agree solutions		X	
Additional requirements	Essential	• Ensures inclusive practice and promotes diversity		
	Desirable			

We guarantee an interview to disabled candidates (as defined in the 2010 Equality Act) who meet the minimum shortlisting criteria in the advertised person specification and apply under the disability confident scheme.