

Job title	Senior Data Engineer		
Job family	Data Management, Analytics and Data Science Job Family	Grade	9

Job purpose

The BBC aims to stimulate and delight audiences across the UK with distinctive, creative content. To support this aim, BBC is entering a new charter period of significant and exciting change, developing new capabilities in order to define a BBC fit for the next generation.

OUR MISSION: To inform, educate and entertain all audiences, to deliver our public purposes

OUR AIM: To reinvent the BBC for a new generation

We'll do this through... **OUR AMBITIONS:** Making sure everyone gets value from the BBC, world-class creativity, global reach, financial stability and making the BBC an even greater place to work.

Individuals within the Data Engineer role ensure that data pipelines are scalable, repeatable, and secure, and can serve multiple users within the BBC. They help facilitate getting data from a variety of different sources, getting it in the right formats, assuring that it adheres to data quality standards, and assuring that downstream users can get that data quickly. This role usually functions as a core member of an agile team.

These professionals are responsible for the infrastructure that provides insight from raw data and handles diverse sources of data seamlessly. They enable big data and batch/real-time analytical solutions that leverage emerging technologies. Additional responsibilities include developing prototypes and proof of concepts for the selected solutions, and implementing complex data projects with a focus on collecting, parsing, managing, analysing and visualizing large sets of data using multiple platforms.

They understand how to apply technologies to solve data problems and to develop innovative data solutions. The Data Engineer is a technical job that requires substantial expertise in a broad range of software development and programming fields. These professionals have knowledge of data analysis, end user requirements analysis, and business requirements analysis to develop a clear understanding of the business needs and to incorporate these needs into technical solutions. They have a solid understanding of physical database design principles, and the system development life cycle. These individuals must work well in a team environment.

As a Senior Data Engineer you will work as part of a multi-disciplinary team to ensure that the BBC's data management, analytics and data science services are implemented and matured in the area that you support to transform business capabilities and enable the next generation of Broadcast and Digital services.

You will be a subject matter expert in your field with specialist domain expertise in at least one technology, software, infrastructure, application, digital or broadcast and production domain. You will provide knowledge and guidance to multiple stakeholders. You will have an appreciation of how the complete range of data science specialisms impact your area and you will use this knowledge to ensure you deliver data-driven change, improve decision making and creative reuse of assets across the area that you support.

Key responsibilities and accountabilities

- Accountable for all efforts in successfully delivering data engineering capability and delivers capabilities / services / solution based on stated data blueprint
- Supports various data and batch/realtime analytical solutions leveraging transformational technologies

- Works on multiple initiatives as a technical team member or lead driving user story analysis and elaboration, design and development of software applications, testing, and builds automation tools
- Translates business requirements into system requirements and participates in creating strategies that use machine learning and data platforms
- Works with the D&E team members to design and implement data solutions in alignment with the project schedule
- Codes, tests, and documents new or modified data systems to create robust and scalable applications for data analytics
- Works with developers to make sure that all data solutions are consistent
- Expands and grows data platform capabilities to solve new data problems and challenges
- Creates data flow diagrams for all of business systems and Implements security and recovery tools and techniques as required
- Builds automation tools and ensures all automated processes preserve data by managing the alignment of data availability and integration processes
- Creates a data catalog and Interprets data results to business outcomes and participates in developing standards and processes for integration initiatives
- Conducts logical and physical database design, designs key and indexing schemes and designs partitioning
- Develops, tests, implements, and maintains database management applications, constructs and implements operational data stores and data marts
- Works with other development teams to review and approve database changes according to database design standards and principles
- Resolves conflicts between models, ensuring that data models are consistent with the ecosystem model (e.g., entity names, relationships and definitions) and conducts Level 2 and 3 support
- Adheres to data management standards, policies and procedures and interfaces with business community and provides ongoing status
- Participates in building and testing business continuity & disaster recovery procedures per requirements
- Performs technology and product research to better define requirements, resolve important issues and improve the overall capability of the technology stack
- Evaluates and provides feedback on future technologies and new releases/upgrades

Knowledge, skills, training and experience

Essential

- Bachelor's degree in computer science, computer engineering, other technical discipline, or equivalent work experience
- Data engineering, data science experience or software engineering
- Experience with agile or other rapid application development methods
- Experience with object-oriented design, coding and testing patterns as well as experience in engineering (commercial or open source) software platforms and large-scale data infrastructures
- Understands how algorithms work and have experience building algorithms
- Significant knowledge of data modeling and understanding of different data structures and their benefits and limitations under particular use cases
- Strong experience working hands-on with big data systems and experience with monitoring, backup, and disaster recovery of data systems
- Strong knowledge in different programming or scripting languages.

Desirable

- Contributing to the development of area of specialism or industry domain
- Broadcast, production, start-up or media experience
- A mix of public sector and commercial experience
- Participation in published documents within your area of specialism
- Successful academic background in your specialist discipline

Job impact

Decision making

- *Provides a leadership role in the development and implementation of data engineering capability and standards; promoting best practice within the area of business*
- *Assessing for value-for-money options for business as usual and emerging technologies*
- *Assessing the appropriate mix of build/buy options within the area of business taking into account strategic direction, business flexibility and emerging disruptive tech*

Scope

- *This is a leadership role providing technical leadership across: project teams; technical delivery resources; an emerging matrix organisation*
- *Strategic dimensions: covering transformation mid and long-term (2-5 years)*
- *People Management: 0+ direct reports. Develops, coaches, motivates, energises and inspires people who do not report to them*
- *Oversee the quality of the work performed by members of any project / supplier teams ensure it delivers measurable business benefits and maintains integrity with the overall strategic direction*

Other information

For Reward team use only

Job Code	
Definition:	Content / Content Support / Support

This job description is a written statement of the essential characteristics of the job, with its principal accountabilities, incorporating a note of the skills, knowledge and experience required for a satisfactory level of performance. This is not intended to be a complete, detailed account of all aspects of the duties involved.

Appendix

There may be sub-sets of the generic job described above which require additional technical skills. This appendix to the generic job description can be developed to cover such situations.

Division	Design & Engineering, TS&A
Reports to (title)	Senior Data Scientist
Location base	London / Flexible

Organisation structure

Additional job specific responsibilities and accountabilities_

Approval	
Manager	Jatin Aythora
HR Business Partner	Liv Wild
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