

JOB DESCRIPTION

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|---|--------------------------------|------------------------|--|
| Job Title | Data Engineer | | |
| Directorate | ICT | | |
| Reporting to | Chief Data & Analytics Officer | | |
| Grade | Grade 10 | | |
| Evaluation ref: | RP259 | Job Family ref: | |
| Role purpose | | | |
| <p>As a Data Engineer, you will lead in designing, building, and maintaining scalable data pipelines and infrastructure that support the organisation's data-informed decision-making. You will collaborate with cross-functional teams to ensure data is accessible, reliable, and optimised for analytics and operational use.</p> <p>This role is ideal for someone with a strong foundation in data engineering principles and has expertise in cloud technologies, big data tools, and modern data architecture. You will contribute to the development of robust data solutions that empower business intelligence, artificial intelligence, and advanced analytics initiatives.</p> | | | |
| Accountabilities | | | |
| <ul style="list-style-type: none"> • Deliver infrastructure and innovative data solutions, which migrate data from across a range of data sources that drives transformation and delivers organisational priorities, efficiencies and savings. • Design, develop, and maintain scalable ETL/ELT pipelines to ingest, transform, and store data from various sources, problem solving to overcome data quality and record matching issues. • Collaborate with data analysts, scientists, and business stakeholders to understand data requirements and deliver creative appropriate solutions to address business challenges in operational service delivery and transformation. • Ensure data quality, integrity, and consistency across systems through validation and monitoring processes. • Optimize data workflows for performance, scalability, and cost-efficiency. • Support the implementation of data governance, security, and compliance standards. • Participate in code reviews, testing, and documentation to ensure high-quality deliverables. • Monitor and troubleshoot data pipeline issues, ensuring timely resolution and minimal disruption. • Assist in the migration of legacy data systems to modern cloud-based platforms, identifying solutions to key business challenges. | | | |

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- Contribute to the continuous improvement of data engineering practices and tools.
- Stay current with industry trends and emerging technologies in data engineering and analytics.

Knowledge / Experience / Skills

| | Essential | Desirable |
|--|-----------|-----------|
| Knowledge | | |
| Data warehousing concepts and technologies (e.g., medallion architecture, OneLake, stored procedures). | X | |
| Data modelling, data lakes, and data integration best practices, resolving any integration problems. | X | |
| Cloud platforms and their data services (e.g., Microsoft Fabric). | X | |
| Data privacy regulations and security best practices (e.g., GDPR, Data Protection Impact Assessments). | X | |
| Secure-by-design data infrastructure, integrating security best practices (e.g., RBAC, PIM and Key Vault). | X | |
| CI/CD and infrastructure-as-code using Azure DevOps. | | X |
| Knowledge of meta- data management. | | X |
| Metadata management and data lineage using Microsoft Purview. | | X |
| Data governance frameworks and standards relevant to local government (e.g. OpenReferral). | | X |
| Information governance integration into engineering workflows, including DPIAs and privacy-by-design. | | X |
| Experience | | |
| Building and maintaining data pipelines (See dimensions of the role for further info). | X | |
| Working in cross-functional Services to deliver data solutions. | X | |
| Ensuring data quality, integrity, and performance. | X | |

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| Implementing CI/CD pipelines and infrastructure automation. | | X |
| Working with real-time or streaming data architectures. | | X |
| Collaborating across ICT, BI, and service teams to deliver data products that meet strategic needs. | | X |
| Producing production-ready documentation, runbooks, and support handover materials. | | X |
| Supporting DPIAs and embedding IG requirements into data engineering practices. | | X |
| Qualifications / Registrations / Certifications | | |
| Degree in Computer Science, Engineering, Mathematics, or a related field. | X | |
| Certification in cloud data engineering (e.g., Fabric Engineer). | X | |
| Additional certifications in DevOps, security, or cloud infrastructure (if applicable). | | X |
| Skills | | |
| Proficiency in a range of programming languages (Python, SQL, JSON). | X | |
| Strong problem-solving and analytical thinking. | X | |
| Effective communication and collaboration. | X | |
| Translating business requirements into technical solutions in cross-functional teams across directorates. | X | |
| Real-time data processing (e.g., Fabric streaming). | | X |
| Communicating technical concepts clearly to non-technical stakeholders, including service leads and IG officers. | | X |
| Automating deployment of data infrastructure and pipelines. | | X |

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Working Conditions

Regular travelling and able to travel countywide, including travel outside standard work hours and to areas that are not currently serviced by public transport.

This role involves working within a dynamic and supportive local authority environment. Candidates should be prepared for the following conditions:

- **Work Hours:** Standard working hours are 37, with occasional requirements for evening or weekend work to meet project deadlines or attend community events.
- **Location:** The primary work location is County Hall, with opportunities for remote work as per organisational policies.
- **Travel:** Some travel within the local area may be required for meetings, site visits, and community engagement activities.
- **Work Environment:** The role involves working both independently and as part of a team, with access to modern office facilities and resources.
- **Health and Safety:** Adherence to all health and safety regulations is mandatory, ensuring a safe working environment for all employees.

Impact

Data Engineers work directly influences the organisation's ability to make data-informed decisions. By building, solving problems, and maintaining robust data infrastructure, they enable faster insights, support predictive analytics, and improve operational efficiency across departments. Their contributions help unlock the full potential of data assets, driving innovation and delivering measurable value to both internal stakeholders and external customers. This may be in the form of developing new pipelines and infrastructure for crucial business operations like social care, ensuring security and data quality from source systems and producing data as a product to directly inform the organisation.

They also play a key role in shaping the organisation's data culture by promoting best practices in data management, fostering collaboration between technical and non-technical teams, and ensuring that high-quality data is readily available to support strategic initiatives.

Dimensions of the Role

Data engineers enable:

- **~£300 million in annual service costs**, underpinning critical operations across adult social care, education, and wider public services.
- **~100GB daily data transfer**, including 60GB via Integrated Runtime, across batch and modelling notebook processes.
- **15 core source systems**, plus **90+ external/VCSE sources**
- **Daily over 250 pipelines are automatically triggered** for system and reporting updates.

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- **50,000 ASC contact requests** annually through the “front door”, generating **170,000 worklists** and supporting **7,500 active clients** at any given time.
- **400 ASC reporting users**, generating **6,500 report views per month** on average.

The platform handles high-volume, high-complexity datasets including:

- **500,000+ ASC records**, with **2.8 million associated documents**.
- **75,000 pupil records annually**, including attendance and attainment.
- **Over 39 million attendance records per year** via daily streaming.

Working Arrangements

Somerset Council's dynamic Working Strategy will be applied to this position.

Corporate Accountabilities

- Ensure compliance with all relevant legislation, organisational policy, and professional codes of conduct to uphold standards of best practise.
- Deliver the aims of the council's equality, diversity and inclusion policies; health, safety and wellbeing of self and others; and Organisational values in everything you do, ensuring team members are also aware of their responsibilities and maintaining their understanding that Equality and Diversity practice covers both interaction with staff, service users and communities and includes challenging discrimination and promoting equality of opportunity for all.

Date: