Royal College of Surgeons of England
ADVANCING SURGICAL CARE

Job description

Job title:	Data Engineer
Grade:	3b
Department:	Business Intelligence Unit
Responsible for:	n/a
Accountable to:	Business Intelligence Unit (BIU) Manager

Job summary

The Royal College of Surgeons of England is delivering an ambitious strategy for 2026-2031 that places data and digital capability at the heart of organisational success. The Data Engineer will play a key role in developing and supporting the College's Microsoft Fabric data platform, enabling trusted, scalable and secure data solutions that support strategic decision making across the organisation. The role will contribute to the design, development and operation of the College's modern data architecture, including data ingestion, transformation, semantic modelling, governance and reporting solutions.

Working within the Business Intelligence Unit, the post holder will support the delivery of the College's Data Strategy by developing robust data engineering solutions whilst also contributing to Power BI reporting, stakeholder engagement and analytics projects. This role offers a unique opportunity to work across the full data lifecycle, from source systems through to insight delivery, helping to embed a culture of trusted, data-driven decision making throughout the College.

The role will contribute directly to the delivery of the College's Data & Digital Foundation, supporting strategic priorities through innovation, collaboration and the effective use of modern data technologies.

Specific duties and responsibilities

1. Microsoft Fabric Platform Development

- Design, build and maintain Microsoft Fabric solutions including Lakehouses, Data Pipelines, Notebooks and Semantic Models.
- Develop and enhance the College's Medallion Architecture.
- Build scalable and maintainable data pipelines that support enterprise reporting and analytics.
- Support architectural decisions, standards and best practice for the College's Fabric platform.
- Contribute to the migration of datasets, reporting solutions and analytical processes into Fabric.

2. Data Engineering and Data Management

- Develop, optimise and maintain data integration processes from multiple source systems.
- Implement data validation, monitoring and quality assurance processes.
- Troubleshoot and resolve data platform issues.
- Support data governance initiatives through documentation, standards and data quality controls.
- Develop reusable engineering patterns and automation processes.

3. Analytics and Reporting

- Develop and maintain Semantic Models that support enterprise reporting.
- Create and enhance Power BI reports and dashboards where required.
- Support colleagues in delivering trusted and accessible reporting solutions.
- Apply data modelling best practice to ensure reporting solutions remain scalable and performant.
- Investigate opportunities to improve reporting through automation and modern analytics techniques.

4. Stakeholder Engagement

- Work with colleagues across the College to understand business requirements and translate them into technical solutions.
- Contribute to project workshops, discovery activities and stakeholder discussions.
- Present technical concepts in accessible language to non-technical audiences.
- Support user adoption of reporting and analytics solutions.
- Help promote a culture of data-driven decision making.

5. Innovation and Continuous Improvement

- Research and evaluate emerging Microsoft Fabric, Power BI and data engineering capabilities.
- Identify opportunities for automation and process improvement.
- Share knowledge and best practice within the BIU and wider College.
- Support continuous improvement of the College's data architecture and analytics capability.

6. General

- The post-holder is expected to be proactive in representing the College at a professional level in relation to their responsibilities and in ensuring their own continuing professional development.
- Undertake such duties appropriate to the grade, as required by the Business Intelligence Unit Manager.

This job description will be subject to review in the light of changing circumstances and may include other duties and responsibilities as may be determined. It is not intended to be rigid or inflexible but should be regarded as providing guidelines within which the individual works.

October 2026

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Person specification

	Essential	Desirable
Qualifications	• Educated to degree level or equivalent	
Experience and skills	• Experience designing, developing and supporting data engineering, analytics or business intelligence solutions. • Experience working with large and complex datasets from multiple source systems. • Experience gathering and interpreting business requirements and translating them into data solutions. • Experience investigating, troubleshooting and resolving data quality and data integration issues. • Strong analytical and problem-solving skills with excellent attention to detail. • Ability to work independently, manage competing priorities and deliver against agreed deadlines. • Excellent written and verbal communication skills, including the ability to explain technical concepts to non-technical audiences. • Experience producing high-quality technical documentation and support materials. • Demonstrable commitment to continuous learning and professional development.	• Experience supporting the implementation of a modern cloud-based data platform. • Experience working within membership, healthcare, charitable or education sectors. • Experience delivering reporting and analytics projects using agile or iterative approaches. • Experience supporting organisational data governance initiatives. • Experience presenting findings, recommendations or technical solutions to stakeholders and user groups.

Technical competencies	• Experience developing solutions using Microsoft Fabric, or equivalent cloud-based data platforms. • Experience designing and maintaining ETL/ELT pipelines and data integration processes. • Strong SQL skills, including querying, transformation and optimisation of data. • Experience working with relational and dimensional data models. • Understanding of modern data architecture principles, including data warehousing concepts. • Experience implementing data quality validation, reconciliation and monitoring processes. • Experience working with Semantic Models and supporting reporting solutions. • Experience using Power BI for data modelling and analytics. • Understanding of data governance, security and access control principles. • Proficient in Microsoft Office applications.	• Microsoft Fabric Lakehouse development. • Data Pipelines, Notebooks and orchestration within Microsoft Fabric. • PySpark and Spark SQL. • Medallion Architecture. • DAX development. • Power Query / M. • Python programming. • API integration and automated data ingestion. • Source control and DevOps principles. • Performance tuning and optimisation of data pipelines and reporting solutions.
People and interpersonal skills	• Strong collaborative approach with the ability to work effectively across departments. • Ability to build positive and productive relationships with a wide range of stakeholders.	• Experience acting as a subject matter expert for data, reporting or analytics solutions. • Experience supporting organisational change and technology adoption

	• Ability to communicate clearly and confidently with both technical and non-technical audiences. • Proactive and self-motivated approach to work. • Strong organisational and time management skills. • Flexible and adaptable approach to changing priorities and business needs. • Ability to challenge constructively and promote best practice in data management and reporting. • Commitment to promoting a data-driven decision-making culture across the College. • Willingness to share knowledge and support the development of colleagues.	

The post holder will also need to demonstrate the following values:

Collaboration	**We embrace our collective responsibilities working collaboratively and as one college.**
	• We work together, using our collective expertise and experience to effect positive change • We are open, honest and transparent, straightforward in our language and actions, acting with sincerity and delivering on our commitments • We take our responsibilities to each other, to patient care and to the environment seriously and we act with this in mind across our work

Respect	**We value every person we come into contact with at the College as an individual, respect their aspirations and commitments in life, and seek to understand and meet their physical and wellbeing needs.**
	• We treat everyone we meet with kindness and integrity and we seek to promote these behaviours in others • We actively seek a range of views and experiences across our work, and we listen to, and make everyone feel, a valued part of the team

Excellence	**We aspire to excellence and success. We share learning from our experiences, apply feedback into practice, and commit to continual improvement.**
	• We work hard to be the best at what we do, recognising and celebrating effort and achievement, and reflecting on our work, so we can learn and improve • We value and invest in research, education and training to drive excellence and put improvements in surgical practice, dentistry and patient care at the heart of our work • We always seek to learn and discover more, valuing knowledge and scientific evidence, basing our decisions on insights, fact and experience

The Royal College of Surgeons of England is an Equal Opportunities Employer. We are open to all talent and we actively ensure that all qualified applicants will receive equal consideration for employment without regards to age, disability, gender reassignment, marriage or civil partnership, pregnancy and maternity, race, religion or belief, sex or sexual orientation.