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| **University of St Andrews**  **IT Services**  **Senior Data Engineer – AD2690ML**  **Further Particulars for Applicants** |

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| **IT Services** |

IT Services is responsible for providing, developing, and maintaining the University’s central IT infrastructure which includes:

* the campus data network, telephone system, external network connections and data centres
* a general-purpose computing service for the students and staff of the University
* corporate information systems for the administrative units
* specialist advice and support for academic and administrative computing

IT Services offers comprehensive [computer, telephone and media services](https://www.st-andrews.ac.uk/itsupport/) to all students and staff at the University of St Andrews and also manages reports of hardware faults and requests for advice on the use of computing service systems via our [IT Service Desk](https://www.st-andrews.ac.uk/itservicedesk/).

The Unit aims to provide a contemporary and integrated technological environment, which sustains and strengthens the University's ability to deliver its strategic objectives, facilitating collaboration, world-class teaching and research, and efficient business processes. We want to deliver an environment which will support students, researchers, and academics by providing an empowering platform and functionality for knowledge creation and exchange.

IT Services is headed up by the Chief Information Officer (CIO) and has approximately 95 staff.

IT Services areas of focus are:

* **Service Delivery**, comprised of the University's IT service desk, desktop support, telephone services, AV support, campus card services, and business relationship management.
* **Enterprise Applications and Development**, providing in-house application development and integration services to support University projects.
* **Infrastructure**, which manages, supports and develops the hardware and software infrastructure, including the University network.
* **CIO's office**, which includes IT Security, ICT Resources and Data Transformation.

This post reports to the Associate CIO (Enterprise Applications and Software Development). IT Services is strongly customer focused and staff are encouraged to keep their skills up to date and to share knowledge and expertise freely with their colleagues both within IT Services and across the University.

**The job description for this role is attached below.**

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| **Job Description** |

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| Job Title: Senior Data Engineer  School/Unit: IT Services  Reporting to: Associate CIO (Enterprise Applications and Software Development)  Job Family: Managerial, Specialist & Administrative | Working Hours: Full-time/36.25 hours per week  Grade/Salary Range: 7/£45,585 - £61,198 per annum  Reference No: AD2690ML  Start Date: As soon as possible  Interview date: |

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| **Main Purpose of Role** |

The University is committed to developing and exploiting its enterprise data assets throughout the organisation. The Senior Data Engineer play a pivotal role in advancing data infrastructure and analytics capabilities to support the university's research, administrative, and academic functions. They will lead the design, development, and maintenance of robust data pipelines, databases, and analytics platforms to enable data-driven decision-making and enhance operational efficiency across various Schools and Units.

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| **Key Duties and Responsibilities** |

1. Team Leadership – Provide technical leadership and mentorship to the Data Engineering Team, fostering a culture of collaboration and innovation, conducive to professional growth.
2. Data Architecture Design - Develop and maintain scalable and efficient data architecture, including data models, ETL processes, and data warehousing solutions to meet the evolving needs of the university.
3. Data Integration - Implement data integration solutions to consolidate data from disparate sources such as academic systems, research databases, and administrative platforms, ensuring data accuracy and consistency.
4. Data Pipeline Development – Design and build robust data pipelines to automate data ingestion, transformation and storage processes, utilising appropriate tools and technologies.
5. Database Management – Manage university databases, ensuring optimal performance, security and scalability. Identify and implement improvements for data processing and storage, striving to optimize query performance and reduce latency.
6. Data Engineering Standards – Adopt proven data engineering and development principles as the core foundation of the platforms, and promote wider adoption.
7. Data Quality Assurance – Establish data quality standards and processes to identify and address data anomalies, inconsistencies and errors, engaging with stakeholders to ensure data integrity.
8. Analytics Platform Development – Collaborate with data specialists and analysts to develop analytics platforms and tools for advanced data analysis, visualization, reporting, leveraging technologies such as Qlik, PowerBI and Collibra.
9. Data Security and Compliance – Implement data security measures and ensure compliance with relevant regulations and University policies, to safeguard sensitive information.
10. Stakeholder Collaboration – Provide expert consultancy to stakeholders across the institution to understand their data needs, translating them into technical solutions that drive value and support strategic objectives.
11. Continuous Improvement – Stay abreast of emerging trends and technologies in data engineering and analysis, and proactively identify opportunities to enhance the data infrastructure and processes.
12. Represent the University on relevant external committees and programmes where appropriate and keep abreast of sector and commercial developments and initiatives.
13. Deputise for the ACIO (EA and Software Development) as and where appropriate.

*Please note that this job description is not exhaustive, and the role holder may be required to undertake other relevant duties commensurate with the grading of the post. Activities may be subject to amendment over time as the role develops and/or priorities and requirements evolve*.

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| **Person Specification** |

This section details the attributes e.g. skills, knowledge/qualifications and competencies which are required in order to undertake the full remit of this post.

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| **Attributes** | **Essential** | **Desirable** | **Means of Assessment**  (application form, interview, test, presentation etc.) |
| Education & Qualifications  (*technical, professional, academic qualifications and training required)* | Relevant Degree level qualification | Postgraduate degree (ideally in a data related discipline)  Data Engineering Certifications  MODAF or TOGAF certifications | Certificates brought to interview |
| Experience & Knowledge  (*examples of specific experience and knowledge sought*) | At least 5 years experience in data engineering roles  Extensive experience of data management, analytics, and governance in a complex environment  In-depth knowledge of data modelling and database design including Kimball, Star and Dimensional modelling.  In-depth knowledge of established data management and reporting technologies  Hand-on experience with data integration tools  Breadth of knowledge in established and emerging data technologies  Able to map systems and interfaces and set standards for data management, analyse current state, and conceive future state.  Awareness of data security principles and the Data Protection Act | Experience in an HE environment  Experienced and in-depth knowledge of Oracle Database and ODI  Data Dictionary development experience  Significant experience of working on Business Intelligence or management reporting projects  Strong understanding of data security best practices in a regulated environment | Application, interview and test |
| Competencies & Skills  (*e.g. effective communication skills, initiative, flexibility, leadership etc.*) | Able to astutely operate in an organisation, garnering respect and being influential.  Excellent interpersonal skills, including a strong customer focus.  Ability to communicate with stakeholders of all levels (from technical colleagues to Senior Management)  Demonstrated leadership abilities, with experience of leading technical projects  Ability to work flexibly and effectively while adapting to change  Excellent written and verbal communication skills  Excellent problem solving skills and resourcefulness, including the ability to work to tight deadlines  Highly motivated, with the ability to work without supervision and undertake independent self-learning | Skills in technical writing | Application, interview and test |

**Essential Criteria** – requirements without which a candidate would not be able to undertake the full remit of the role. Applicants who have not clearly demonstrated in their application that they possess the essential requirements will normally be rejected at the short listing stage.

**Desirable Criteria** – requirements which would be useful for the candidate to hold. When short listing, these criteria will be considered when more than one applicant meets the essential requirements.

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| **How to apply** |

We encourage applicants to apply online at [www.vacancies.st-andrews.ac.uk/welcome.aspx](http://www.vacancies.st-andrews.ac.uk/welcome.aspx).

If you have difficulties in completing the online application form, please call +44 (0)1334 462571 or contact [vacancies@st-andrews.ac.uk](mailto:vacancies@st-andrews.ac.uk) for an application pack.

Applications should consist of the online application form only. Please do not upload CVs or covering letters. OR

Applications should consist of (please delete as required):

* Letter of application
* CV
* Names and contacts of two referees
* Other (please specify)

For all applications, please quote ref: AD2690ML

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| **Other Information** |

This post may be primarily based at the Eden Campus at Guardbridge, a state-of-the-art working environment for professional services units.

Before an appointment can be confirmed, you will be subject to a Criminal Records check.

In accordance with the new immigration rules, it is with regret that this role does not meet the current suitability requirements set by the UKVI to enable sponsorship of migrant workers.The University encourages all interested candidates to apply regardless of nationality and all applications received are assessed against the essential and desirable criteria listed in the further particulars.  The successful candidate will have to demonstrate their right to work in the UK prior to commencing employment and where required, obtain the right to work in the UK without relying on University sponsorship.  Information on other visa options is available at [https://www.gov.uk/check-uk-visa](https://eur01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.gov.uk%2Fcheck-uk-visa&data=04%7C01%7Csg43%40st-andrews.ac.uk%7Cafac7322058645cedc6808da12632e01%7Cf85626cb0da849d3aa5864ef678ef01a%7C0%7C0%7C637842514422631093%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C3000&sdata=kM%2F3JwneeNydEuqzYCOGR8Av87sjhFySRETnsBd8Rb8%3D&reserved=0) or by contacting our HR Immigration Team on [hrimmigration@st-andrews.ac.uk](mailto:hrimmigration@st-andrews.ac.uk).

Equality, diversity and inclusion are at the heart of the St Andrews experience. We strive to create a fair and inclusive culture demonstrated through our commitment to diversity awards (Athena Swan, Carer Positive, LGBT Charter and Race Charters). We celebrate diversity by promoting profiles of BAME, LGBTIQ+ staff and supporting networks including the Staff BAME Network; Staff with Disabilities Network; Staff LGBTIQ+ Network; and the Staff Parents & Carers Network. Full details available online: <https://www.st-andrews.ac.uk/hr/edi/>

The University of St Andrews is a charity registered in Scotland (No SC013532).

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| **Obligations as an Employee** |

You have a duty to carry out your work in a safe manner in order not to endanger yourself or anyone else by your acts or omissions.

You are required to comply with the University health and safety policy as it relates to your work activities, and to take appropriate action in case of an emergency.

You are required to undertake the Information Security Essentials computer-based training course and adhere to its principles alongside related University Policy and Regulations.

You are required to undertake all mandatory training as deemed appropriate by the University for your role.

You are responsible for applying the University’s equality and diversity policies and principles in your own area of responsibility and in your general conduct.

You have a responsibility to promote high levels of customer care within your own area of work/activities.

You should be adaptable to change, and be willing to acquire new skills and knowledge as applicable to the needs of the role.

You may, with reasonable notice, be required to work within other Schools/Units within the University of St Andrews.

You have the responsibility to engage with the University’s environmental sustainability strategy, committing the University to reach net-zero by 2035.

You are required to engage with the technology, systems and communication channels necessary for you to undertake your work and must update your personal details via HR Self Service whenever there is a change.

Employees with staff management responsibilities must familiarize themselves with appropriate policies.

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| **Who Are We? St Andrews At a Glance** |

* The third oldest university in the English-speaking world.
* Ranked top UK university in the [Guardian University Guide 2024](https://news.st-andrews.ac.uk/archive/st-andrews-keeps-top-spot-in-uk-university-ranking/).
* Ranked number one in the UK in the [Times and Sunday Times Good University Guide 2024](https://news.st-andrews.ac.uk/archive/historic-double-first-for-st-andrews/).
* Students at the University of St Andrews are more positive about their education than students at any other mainstream university in the [National Student Survey 2023](https://news.st-andrews.ac.uk/archive/st-andrews-students-most-positive-in-uk/).
* The University of St Andrews is Scotland’s top university and one of the top four universities in the UK in [The Complete University Guide 2024](https://news.st-andrews.ac.uk/archive/st-andrews-top-in-new-university-rankings/).
* The University is top in the UK for Teaching Quality in the [Daily Mail University Guide 2024.](https://www.dailymail.co.uk/news/university-guide/article-12491201/University-rankings-league-table-Use-Daily-Mails-interactive-guide-right-uni-you.html)
* Research-intensive, more than 88% of research carried out by the University of St Andrews is world-leading or internationally excellent (Research Excellence Framework 2021).
* Athena SWAN [Bronze Award holder](https://news.st-andrews.ac.uk/archive/athena-swan-awards/)
* A [Strategy](https://www.st-andrews.ac.uk/about/governance/university-strategy/) founded on ambition to be World-Leading, Diverse, Global, Entrepreneurial and Sustainable all underpinned by a commitment to socially responsibility.
* A community of 10,000 students and 3000 staff.
* Highly international – more than 30% of students and staff are from outwith the UK
* A non-campus university, closely integrated with the ancient town of St Andrews
* Top quality [sports](https://www.st-andrews.ac.uk/sport/), [music](https://www.st-andrews.ac.uk/music/) and [nursery](https://www.st-andrews.ac.uk/hr/edi/carers/childcare/nurseries/) facilities for staff and students

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| **University of St Andrews** |

Founded in the 15th century, St Andrews is Scotland’s first university and the third oldest in the English-speaking world. The University of St Andrews is one of Europe’s most research-intensive seats of learning. It is one of the top-rated universities in Europe for research, teaching quality, and student satisfaction.

Today, under the leadership of Principal and Vice-Chancellor Professor Dame Sally Mapstone FRSE, the University’s Strategy is to broaden its global influence, with a focus on diversity, building a culture of entrepreneurship, research excellence, and social responsibility.

St Andrews is committed to broadening digital education, enhancing the experience of our on-campus students, while bringing a St Andrews education to much wider global community.

From climate science and sustainable development to energy ethics and grass-roots level action across all the communities in which it operates, sustainability is at the heart of the University’s Strategic vision. World-leading research on sustainability is taking place across the breadth of the University, with researchers addressing key questions on the defining issue of our generation.

The University has set an ambitious target of carbon net zero by 2035, ten years ahead of the Scottish Government’s 2045 target.

St Andrews is ranked as the top university in the UK in *The Guardian Guide 2024*, and *The Times and Sunday Times University Guide 2024*. The *Complete University Guide 2024* ranks St Andrews as the top university in Scotland, and fourth in the UK.