

# Data Engineer

## Customer and sector enablement

## Data analytics

**Reports to:** Andy Priest

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### Jisc Guiding principles

We believe in 'Technology for Good' and improving lives through learning and research. To achieve we are all guided by 6 principles which underpin how we approach our roles and each other. We use these Guiding principles everyday and are used to recruit, develop and recognise everyone in Jisc.

Be original	Think social enterprise	Make an impact
Always inclusive	Never stand still	Get it done

### The team:

The Data Engineering team is responsible for developing and undertaking anything data-related, using leading-edge software tools and software development expertise – focussed purely on education data. The team also supports Universities and Colleges to help them integrate disparate data sources into Jisc's Data Hub- the key engine and heartbeat of Jisc's data analytics services.

The team also works closely with customers and partner organisations to understand their systems and develop new integration solutions such as automated database queries, scripts and applications. This involves complex research & analytics of various systems to build detailed technical requirements and specifications for successful development, documentation, testing and implementation to an agreed standard.

Jisc's Data Analytics (DA) services are complex and broad reaching, continually growing, where compatibility with various datasets is critical – with the need to keep abreast of knowledge around multiple institutional systems, processes and technology. The Data Engineer will be expected to use their expertise to drive the data development of the service forward.

### The role:

The Data Engineer will support developments in our current and emerging work with Universities and Colleges to help them integrate disparate data sources into Jisc's Data Hub - the key engine and heartbeat of Jisc's data analytics services.

This will involve working closely key stakeholders to understand their systems and develop new data systems, infrastructure and integration solutions. This involves complex research & analytics of various systems to build detailed technical requirements and specifications for successful development, documentation, testing and implementation to an agreed standard.

Responsibilities will be expected to be developed and finalised over time and will include but will not be restricted to:

- To work on software & product developments, from inception to delivery, for all relevant work tasks which maintain and develop data capability within DA
- To become a technical expert on data engineering tasks related to Learning Analytics
- To support the delivery of products and solutions to both external (Jisc membership) and internal customers – using Jira and other project management tools/ approach to accomplish this using Agile methods
- Contribute to the development of a range of integration solutions to support Jisc's services by writing high quality code to agreed standards
- Follow Jisc's process for application secure and secure software development
- Keep up to date with latest development techniques and making suggestions for improvements to team software development processes
- Follow internal processes for managing software development across its lifecycle, from initial design, to regular feature releases and bug fixes
- Support the development of junior members of the team in data analytics integration approaches, techniques and outcomes
- Drive the growth of next generation analytics by developing scalable procedures and processes for multiple sources in a format that is reusable across multiple institutions

## The person:

	Need to have	Nice to have
<b>Behaviours</b>	Customer first approach	
	Working together and supporting the team	
	Making effective decisions	
	Delivering at pace	
	Seeing the bigger picture	
	Strive for continual improvement	
<b>Skills</b>	An ability to act and work independently and as an effective and enthusiastic team member.	Excellent oral, written communication and inter-personal skills.
	An ability to explore technology solutions across the technology stack.	
	An ability to listen to and interpret requirements, mentor and manage others, and negotiate and influence stakeholders.	
<b>Experience</b>	Build and design large-scale and real-time batch data pipelines.	Experience of formal technical project management methodologies (preferably Agile, with Jira).

	Build and manage data storage solutions; Data Lakes, Databases and Data Warehouses.	Worked with structured and semi-structured data.
	Implemented cloud technologies in AWS, including Lambdas, RDS, SQS,S3 and serverless working models.	
	Strong expertise in Python for data processing and pipelines, along with a willingness to develop expertise in other languages as needed.	
<b>Qualifications</b>	A good IT related degree and/or relevant professional qualifications and training.	

## The organisation

We're constantly changing and evolving at Jisc, so this job description just gives a flavour of what the role involves. It will change as our operations develop. Getting face to face is something we value and find time for when we can, so you may need to travel on occasion. Our main offices are in Bristol, Harwell, London and Manchester.