

Software engineer, census support

Role brief

Directorate	Digital resources
Base location	Manchester
Grade	D14
Date	1 March 2017 to 31 August 2017
Reports to	Technical services manager, census support, UK Data Service
Responsible for	Development and support of systems in the digital resources directorate.

1. Background

This role is a key technical operational position to support the development and success of the UK Data Service census support team. The post-holder will be responsible for the development and maintenance of publicly facing web application that provide access to census and related data and for other work across the socioeconomic data services as necessary, in line with priorities for development agreed by the technical services manager.

The UK Data Service provides unified access to an extensive and expanding collection of high-quality digital data critical for social and economic research, including the UK censuses and government funded surveys, longitudinal studies, international macrodata, qualitative data and business microdata.

The service provides seamless access and support to meet the needs of researchers and analysts in the higher education, commercial, voluntary and community sectors, and all levels of government.

The service is staffed by data experts based at centres of expertise across the country: UK Data Archive, University of Essex; Jisc; Cathie Marsh Institute, University of Manchester; School of Geography, University of Leeds; Geography and Environment, University of Southampton; EDINA, University of Edinburgh; Department of Information Studies and Centre for Advanced Spatial Analysis, University College London.

2. Purpose and scope

The developer will make a significant contribution to the design and implementation of a service which will provide access to open census aggregate, flow and boundary data. Our existing services are well used within academia and the broader research environment.

The purpose of this will be to develop this new service with a particular focus on:

- Building applications in response to specific use cases within the context of an agreed architecture and development approach
- Ensuring that technical solutions adhere to best practice and are robust, extensible and standards compliant
- Providing support, advice and guidance to colleagues across Jisc and mentoring junior staff as requested

The developer will sit in the digital resources directorate and the technical services manager will hold the formal reporting line.

3. Key accountabilities and role outputs

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

- Work on projects as agreed with the technical services manager and delivery in the context of socioeconomic data services strategic plan
- Contribute to the design, functionality, usability and accessibility of a new integrated data application (IDA), ensuring that technical continuity is maintained and development standards are met
- Contribute to the design of a new data architecture to support the development and running of the integrated data application (IDA)
- Be responsible for designing and implementation of new data transformation routines to agreed specifications
- Build, test, implement and maintain web-based applications/services, troubleshooting web application and infrastructure problems to reach resolution as required
- Build, test, implement and maintain new and existing APIs
- Discuss and recommend technical developments to improve the quality of our web applications and supporting infrastructure
- Create and maintain technical documentation to a high standard
- Develop an understanding of existing information systems and consider opportunities for future development for web application solutions
- Keep abreast of new technology for future-proofing applications and infrastructure, sharing knowledge with colleagues as appropriate
- Monitor the ongoing performance of web applications and infrastructure

4. Skills, knowledge and experience

	Essential	Desirable
Qualifications	Relevant IT qualification or equivalent demonstrable development experience gained in a similar role.	Preferably educated to a degree level in related subject or equivalent.
Experience	Experience of developing and deploying production websites and web applications, complemented by experience using web development packages such as Visual Studio or Eclipse	<ul style="list-style-type: none"> • Experience of working with APIs and data frameworks • Experience of developing scalable web services across multiple platforms and systems • Previous experience of working in a development team to build and implement websites and applications.
Knowledge	Extensive knowledge and experience of: (X)HTML, CSS, Java Script, XML and XML schemas, JSON, PHP, REST, Python	<ul style="list-style-type: none"> • Experience of using Microsoft Access/Excel including VBA macros • Knowledge and experience in data modelling and in developing and using open standards dataset descriptions using SDMX and RDF schemas

		<ul style="list-style-type: none"> • Developing systems that run on Linux • Experience of working with census data (aggregate, flow and/or boundary)
Skills	Experience of working with relational database engines, ideally PostgreSQL or MySQL	<ul style="list-style-type: none"> • Agile/SCRUM methodologies • MSSQL 2008/14 • C#, asp.net and WCF • Perl • GIS

5. Key contacts

Important additional information

The technical services manager will discuss all elements of the role brief with the appointee on appointment and after six months, recognising that some elements may need changing.

The above is provided for guidance, is not contractual, and is not an exhaustive list of all accountabilities that the post-holder may have.