

Software engineer – Django/Python web application developer

Role brief

Directorate	Strategy and corporate services
Base location	Any Jisc location
Grade	C
Level	15
Job family	Professional services
Date	June 2017
Reports to	Web development team leader
Responsible for	N/A

1. Background

“Jisc is the UK higher, further education and skills sectors’ not-for-profit organisation for digital services and solutions.

We:

- Operate **shared digital infrastructure and services**
- Negotiate **sector-wide deals** with IT vendors and commercial publishers, and
- Provide trusted **advice and practical assistance** for universities, colleges and learning providers.”

We operate Jisc as a single, conceptual organisation and provide easy-to-use, accessible corporate services and functions. We are responsible for: group infrastructure (IT and estates, including facilities), the strategic support unit, people services, governance, and legal and contracts.

2. Purpose and scope

This role is a key technical operational position to support the development and success of the digital technology and delivery team. The post-holder will be responsible for the development and maintenance of online applications and the Jisc web estate both for public facing and internal systems and for other work across the Jisc as necessary, in line with priorities for development agreed by the Jisc information management board.

The post-holder will undertake the development planning and implementing improvements to the applications and websites in line with agreed overall Jisc direction in these areas. This post-holder will also build web services to connect data systems to support Jisc’s information architecture, in the context of IMB agreed priorities, taking advantage of new technology where appropriate, and will provide guidance on opportunities and increase the use of new technologies.

The post-holder will initially be responsible for supporting the transfer of a mature high traffic web application into Jisc from an external organisation. The post-holder will need to work with external people in order to support the transfer and learn the system in readiness for Jisc taking over full operation and support for the application. The post-holder will be involved in a mixture of new development and ongoing maintenance for a variety of web applications.

The software engineer reports to the web development team leader.

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 web development team leader that provide web and online application services across the wider Jisc to assist in the integration of business processes
- Be responsible for the design, functionality, usability and accessibility of the Jisc websites and applications, ensuring that technical continuity is maintained and development standards are met
- Design, schedule and deliver new and enhanced web applications through the Django platform according to priorities agreed with the web development manager
- Build, test, implement and maintain web-based applications/services, troubleshooting web application and infrastructure problems to reach resolution as required
- Design and build SOAP/REST web services, interfacing to non-web systems to support the development of our information architecture and end-to-end processors
- Develop and extend CRM functionality, in particular consuming data from various information systems
- Discuss and recommend technical developments to improve the quality of our websites/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
- With the web development team leader, carry out risk analysis of introducing new technology for development and infrastructure, and liaise with CSIRT (in-house team) to ensure suitable security as required on web developments
- Monitor the ongoing performance of web applications and infrastructure

4. Skills, knowledge and experience

	Essential	Desirable
Qualifications	<ul style="list-style-type: none"> • Relevant IT qualification or equivalent demonstrable development experience gained in a similar role 	
Experience	<ul style="list-style-type: none"> • Experience of building web applications using Python and the Django framework • Experience building large and high traffic web applications • Experience of working in a development team to build and implement web sites and applications, following deployment and build processes using code • Experience of working with relational database 	<ul style="list-style-type: none"> • Experience of running web applications on Amazon Web Services • Experience working with Continuous Integration systems, ideally Jenkins • Experience of developing scalable web services across multiple platforms and systems

	<p>engines, ideally PostgreSQL or MySQL</p> <ul style="list-style-type: none"> • Experience of working with NoSQL database engines, ideally Cassandra • Experience of working with a version control system, ideally Git • Experience of Test Driven Development and a commitment to TDD practices especially within small teams 	<ul style="list-style-type: none"> • Experience of working with and developing against APIs and data frameworks • Experience of developing custom modules for content management systems on production websites
Knowledge	<ul style="list-style-type: none"> • In-depth knowledge and 2+ years' experience of developing and deploying production websites and web applications • Excellent knowledge and 2+ years' experience of: Python, Django, HTML 5, CSS, JQuery, JSON and REST 	<ul style="list-style-type: none"> • Knowledge and experience of: PHP, NodeJS, XML and SOAP
Skills	<ul style="list-style-type: none"> • A good level of understanding of relational database design concepts and usage, preferably working knowledge of information systems design and implementation • Good knowledge of coding, usability and accessibility standards (WCAG) • Ability to think beyond single tasks and take a framework orientated approach • Excellent organisational skills, with ability to work to deadlines and manage own time • Strong verbal and written communication and interpersonal skills with the ability to listen to and interpret requirements with technical and non-technical audiences • Ability to respond flexibly to the development needs of the organisation • Good technical documentation skills and ability to produce clear diagrams to document complex information systems and workflows • Good problem solving skills and ability to debug existing code • A positive attitude, be self-motivated and results orientated • Ability and willingness to update professional knowledge and commitment to continuous improvement 	<ul style="list-style-type: none"> • Awareness of the Drupal content management system

5. Key contacts

- Web development team leader
- Head of infrastructure
- Director of group infrastructure

Important additional information

The web development team leader 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.