The University of Manchester

Job Description

Job title: Senior Software Developer (Technical)

Reports to: Head of Digital Development

Organisation unit: University of Manchester Library: Research & Digital Horizons

Date: January 2021

HERA: MAPPS-UML-R&DH-DD-C (491, Grade 7)

Overall purpose of the job:

- To work with colleagues in the Digital Library Applications Development Team and to oversee all technical aspects of software development from architectural design and implementation through to testing and support
- To lead on the selection of appropriate technologies and methodologies to ensure the Library is at the cutting edge of service innovation and delivery
- To advise on points of security, interoperability, sustainability, accessibility and usability across the development lifecycle

Key responsibilities, accountabilities and duties:

- To contribute to an environment that values and celebrates the diverse nature of the University of Manchester's population and to take positive steps to achieve equality in the workplace and to both meet and exceed our obligations under equality legislation
- To act as lead developer on new software applications and services in support of the Library's strategic objectives
- To translate business requirements into robust applications ensuring they are delivered to defined timescales
- To ensure all software is developed using an appropriate methodology
- To ensure all software developed within the team is high quality, well documented and conforms to all relevant internal and external policies and standards
- To guide the team on the appropriate choice of technologies to ensure all developed applications are supportable, sustainable and fit for purpose
- To work with end users to identify and resolve problems and issues with applications
- To ensure all software produced is appropriately tested and version controlled
- To advise on the employment of appropriate technical standards relating to security, interoperability, sustainability, accessibility and usability
- To ensure developed services comply with relevant internal policies and standards relating to information governance, architecture and security

- To work on their own initiative to investigate and provide solutions to problems including undertaking research into new technologies and methodologies
- To plan, develop and carry out training for new systems and applications as appropriate
- To contribute proactively to the development and implementation of Library-wide operational planning and initiatives in support of University strategy and Library priorities
- To be responsible for compliance with and the embedding of University policies, procedures and requirements - in particular those relating to health and safety; equality, diversity and inclusion; and information governance
- Such other duties as may reasonably be associated with the grade and a role of this nature
- To work at any Library site as required
- To be flexible in relation to hours of work as may be reasonably requested from time to time
- To wear supplied Library branded clothing during defined promotional activities and special events
- To understand the specific context within which the role operates and how it relates to the wider University goals and business processes, in order to facilitate informed decision making
- To ensure the working environment reflects the University's and Library's values

Person Specification:

Essential knowledge, skills and experience:

- Either a good honours degree in a relevant subject plus appropriate practical experience in a similar or related role(s) **OR** significant vocational experience, demonstrating development through the acquisition of appropriate professional and specialist knowledge and involvement in a series of progressively more demanding relevant work/roles
- Experience of technical leadership in the development of software applications and services
- Excellent time management, interpersonal and communications skills
- Experience of managing the planning, development and implementation of software applications and services
- Proven analytical and problem-solving capability
- Wide knowledge of software development methodologies with significant experience of agile development
- Extensive technical expertise in a wide-range of technologies including, but not limited to, Java, .NET, MEAN-stack etc.
- Expert understanding of web technologies and their application including HTML5, CSS, Javascript, XML, XSLT, JSON etc.
- Experience of designing, building and running RESTful web services.
- In-depth understanding of issues relating to security, interoperability, accessibility and usability in web-based systems
- Solid grasp of the principles of relational and NoSQL database technologies and experience of database design and development
- Knowledge of project management methods and techniques and proven ability to deliver projects to agreed specifications and deadlines

Desirable knowledge, skills and experience:

- Experience of mobile application development using frameworks such as Apache Cordova
- Experience in the use of Artificial Intelligence and Machine Learning in software systems
- Advanced knowledge of code versioning and managements systems e.g. GIT
- Knowledge of automated testing systems
- Knowledge of appropriate policies and standards relating to the development of web applications
- Ability to use and design complex datatypes and algorithms
- Experience of application user interface design
- Experience in the Higher education sector