University of Nottingham
UK | CHINA | MALAYSIA

Role profile

Job title	Data Scientist / Engineer	Job family and level	Administrative, Professional and Managerial level 4
School/ Department	Digital Research Service	Location	Biodiscovery Institute, University Park

Purpose of role

The purpose of this role is to support the aims of the Digital Research Service (DRS) to deliver bespoke, high-quality support in the areas of data science and data engineering. They will work on projects both individually, as well as in collaboration with other team members or to support senior team members and deliver analyses and software within agreed timeframes and budgets. This role in particular will require support to the creation of a digital data infrastructure to support the Engineering and Physical Sciences Research Council (EPSRC) project entitled: Designing bio-instructive materials for translation-ready medical devices. In particular, the objective is to use machine learning and AI to extract design rules from complex analytical data streams with in vitro and in vivo data to develop both mechanistic understanding and guide the production of better materials for use as medical devices. The candidate will be required to engage with multiple researchers and academics in the School of Pharmacy, Life Sciences, Engineering and Physics to provide a solution for safe data sharing, curation, interrogation and modelling.

	Main responsibilities (Primary accountabilities and responsibilities expected to fulfil the role)	**% time per year**
1	**Undertake digital research projects in Biomaterials Discovery** ▪ Take responsibility for the definition, documentation and satisfactory completion of collaborative digital research projects defining requirements, timescales, priorities, milestones and managing risks to the success of the project, specifically for Biomaterials discovery ▪ Design, construct, test and document digital research and data analytics pipelines to support the needs of the researchers within the project ▪ Support researchers in understanding and following data handling best practices	75%
2	**Promote the service** ▪ Actively represent Digital Research Service and the Biomaterials EPSRC project with a remit to offer specialist expertise and guidance ▪ Promote awareness, access and use across the institution ▪ Provide researchers with access to expertise and advice that has a strong impact on improving research quality	10%

3	**Deliver Output** ▪ Support researchers and industrial partners by contributing to research papers to be published in academic literature	5%
4	**Personal Development** ▪ Develop own skills and professional capability in line with the needs of the service ▪ Maintain an awareness of technical developments, tools and ideas in research ▪ Computing, including attending seminars, technical briefings, conferences and technical groups	5%
5	▪ Any other duties appropriate to grade and role of the person appointed	5%

Person specification

	Essential	Desirable

Skills	▪ Data Engineering: data infrastructures design and maintenance, SQL, data harmonization, ETL
	▪ Experience with methodologies for agile software development, tests, version control and continuous integration
	▪ Experience in:
	  ○ Statistical approaches
	  ○ Regression Models
	  ○ Machine Learning and Deep Learning
	  ○ Generative Models
	  ○ Federated Learning
	▪ The ability to apply and implement Data Analytics methodologies using:
	  ○ Python and PyTorch
	▪ Excellent oral and written communication skills, including the ability to communicate with clarity on complex information
	▪ Ability to analyse and illuminate data, interpretation of reports, evaluate and criticise texts and bring new insights
	▪ Ability to read, interpret related data analytics paper and translate the state-of-the-art statistical methods to new problems
	▪ Strong organisational, collaborative, and communication skills for dissemination of results and team science
		▪ A broad understanding of a mixture of database technologies
		▪ Skilled in data visualisation, using relevant libraries and packages in Python

Knowledge and experience	▪ Experience in data gathering and data aggregation ▪ Experience in use of research methodologies and techniques to work within area	▪ Experience in working in a service orientated group ▪ Understanding and experience of research in the commercial sector ▪ Experience working in an agile environment
Qualifications, certification and training (relevant to role)	▪ Degree in a relevant computational field	


ECU
GENDER CHARTER
Athena
SWAN
Silver Award

RACE CHARTER
Race
Equality
Charter
Bronze Award

disability
confident
COMMITTED

Stonewall
DIVERSITY
CHAMPION

Expectations and behaviours

The University has developed a clear set of core expectations and behaviours that our people should be demonstrating in their work, and as ambassadors of the University's strategy, vision and values. The following are essential to the role:

Valuing people	Is friendly, engaging and receptive, putting others at ease. Actively listens to others and goes out of way to ensure people feel valued, developed and supported.
Taking ownership	Is clear on what needs to be done encouraging others to take ownership. Takes action when required, being mindful of important aspects such as Health & Safety, Equality, Diversity & Inclusion, and other considerations.
Forward thinking	Drives the development, sharing and implementation of new ideas and improvements to support strategic objectives. Engages others in the improvement process.
Professional pride	Is professional in approach and style, setting an example to others; strives to demonstrate excellence through development of self, others and effective working practices.
Always inclusive	Builds effective working relationships, recognising and including the contribution of others; promotes inclusion and inclusive practices within own work area.

Key relationships with others