



**Cardiff**  
Metropolitan  
University

Prifysgol  
Metropolitan  
Caerdydd

## JOB DESCRIPTION

<b>Job Title:</b>	<b>Data Scientist</b>
<b>Post Number:</b>	<b>V847</b>
<b>Department :</b>	<b>Department of Computing &amp; Information Systems, Cardiff School of Management</b>
<b>Location:</b>	<b>Cardiff</b>
<b>Salary:</b>	<b>c.£20,000 + professional development package</b> (including a £5k travel/subsistence budget + opportunity to pursue a fully-funded research MPhil at Cardiff Met)
<b>Tenure:</b>	<b>Two Year Fixed Term Contract</b>
<b>Accountable to:</b>	<b>KTP Knowledge Based Supervisor, Cardiff Metropolitan University</b>

### **Role Summary:**

A full-time Data Science position is available on a collaborative R&D project between Cardiff Metropolitan University and Yard Associates, to develop a web analytics framework for predicting future purchasing behaviours and recommended marketing strategies using hybrid machine learning and big social data analytics.

This is a two-year Knowledge Transfer Partnership project between Cardiff Metropolitan University and Yard Associates, funded by Innovate UK with support from the Welsh Government.

### **Principal Duties and Responsibilities:**

- Work collaboratively with the KTP project team at Cardiff Metropolitan University and Yard Associates to scope and implement the project;
- Domain literature research of problem domain and target market;
- Data collection, cleaning, exploration and visualisation;
- Develop hybrid machine learning, data science and data mining approaches, including bespoke algorithm development, to solve emerging project challenges;

- Evaluating and integrating appropriate high performance computing/cloud computation vendors;
- Testing, benchmarking and analysis of the tool and framework to develop a marketable new product/service;
- Convene and lead monthly technical meetings to discuss progress, targets and resources;
- Dissemination and commercialisation e.g. writing high-impact academic outputs and potential follow-on funding, IP protection.
- Complete the compulsory KTP Associate online training modules, alongside any relevant administrative activities.

### **Additional Information:**

This is an exciting cutting-edge collaborative research project between Cardiff Metropolitan University and Yard Associates, building upon their existing data science and big social data research and policy expertise, to develop a web analytics framework for predicting future purchasing behaviours and recommended marketing strategies using hybrid machine learning and big social data analytics.

In the increasingly competitive digital agency space, it is no longer enough to be able to provide bespoke digital expertise and software solutions. Further sustainable growth will be predicated on applying deeper technical skills – particularly data/analytics-driven knowledge and understanding – to innovate with existing products and tools, as well as developing new approaches. This will provide the data science and data-driven expertise and infrastructure for developing new approaches and techniques to allow Yard to meet client requirements now, as well as attracting new business in the future.

### **About the Department:**

The Department of Computing & Information Systems at Cardiff Metropolitan University is a rapidly expanding department based in Cardiff School of Management at its Llandaff Campus. There have been substantial recent strategic investments in data science, informatics and games development across its undergraduate, postgraduate and research portfolio. Its research, knowledge transfer and enterprise interests cuts across data science, big social data, intelligent systems and cyber-physical systems, underpinned by a range of taught undergraduate and postgraduate programmes across computer science, data science, software engineering and business information systems. For more information about the Department see: <http://www.cardiffmet.ac.uk/csm>

### **About Yard Associates:**

Founded in 2006 and based in Cardiff, Yard Associates Ltd has a long-standing track record and reputation in delivering high-quality web, digital and social solutions: identifying trends and client requirements from rapidly-changing marketplace. They have proven digital and data expertise as well as project delivery, working with a number of clients across a range of sectors to identify products and services to support the growth and development of businesses. For more information about Yard Associates see: <http://weareyard.com>

To find out more about this position, please contact Professor Tom Crick ([tcrick@cardiffmet.ac.uk](mailto:tcrick@cardiffmet.ac.uk)) or Dr Chaminda Hewage ([chewage@cardiffmet.ac.uk](mailto:chewage@cardiffmet.ac.uk)).

### ***Standard Notification***

**These guidelines are provided to assist you in the performance of your contract. The university is a dynamic organisation; therefore changes may be required from time to time. Any changes will be made in consultation with the post-holder. The Summary of Duties and Responsibilities is not intended to be an exhaustive list of tasks performed. Other associated technical tasks are likely to be performed as directed by the line manager.**

**It is accepted that individual staff will have a specialist skills and knowledge base in relation to the role they have been appointed to. In addition to this, Cardiff Metropolitan University expects that all staff will contribute to the vision and ethos of the university and conduct themselves in a professional, courteous and student/customer focused manner at all times. All staff should have particular regard for their responsibilities under Cardiff Metropolitan University's Equalities, Financial, Environmental and Sustainability, Human Resources and Health and Safety policies and procedures.**



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**PERSON SPECIFICATION**

Post: **Data Scientist**

Unit/School: **Computing & Information Systems,  
Cardiff School of Management**

**\*Key**

A - Application form

I - Interview

T/P - Test/Presentation

FACTORS	ESSENTIAL AND DESIRABLE CRITERIA	ASSESSED BY		
		A*	I*	T/P*
Education & Qualifications (Essential)	A high quality undergraduate honours degree in computer science, software engineering, informatics, marketing analytics or related data-driven/computational fields.	√		
Education & Qualifications (Desirable)	A postgraduate degree in an area relating to data science, big data analytics, data mining, business intelligence or marketing analytics.	√		
Knowledge (Essential)	Software development using appropriate languages/tools/methodologies.	√	√	
	Knowledge of the challenges of analysing and mining web data.	√	√	
Knowledge (Desirable)	Knowledge of applying data science techniques and high performance computing to solve domain problems.	√	√	
	Knowledge of applying a range of data analysis techniques to large-scale real-world datasets.	√	√	
	Knowledge of applying machine learning techniques for user behaviour prediction.	√	√	
	A sound knowledge of research within a university setting.	√	√	

<p>Skills &amp; Abilities (Essential)</p>	<p>Effective interpersonal and presentation skills.</p> <p>Communicate material of a specialist or highly technical nature.</p> <p>Good organisational skills with the ability to manage and prioritise own workload.</p> <p>Convene and lead monthly technical team meetings.</p> <p>Ability to act as a responsible member of a team.</p> <p>Broad analytical and problem-solving skills.</p> <p>Good time management skills.</p> <p>Be innovative and creative in analysing and interpreting research data and draw conclusions on the outcomes.</p> <p>Contribute to collaborative decision making with the KTP project team.</p>	<p>√</p> <p>√</p> <p>√</p> <p>√</p> <p>√</p> <p></p> <p></p> <p></p> <p></p> <p></p> <p></p>	<p>√</p> <p>√</p> <p>√</p> <p>√</p> <p>√</p> <p>√</p> <p>√</p> <p>√</p> <p>√</p>	
<p>Experience Paid/Unpaid (Essential)</p>	<p>Experience in the development of software systems outside of formal university education.</p>		<p>√</p>	
<p>Experience Paid/Unpaid (Desirable)</p>	<p>Experience of real world (big social) data analysis, ideally using machine learning and data mining techniques.</p> <p>Experience of dealing with web datasets and appropriate open source toolchains.</p> <p>Track record of successful high-quality academic publications.</p> <p>Experience of grant formulation and submission to external bodies.</p>	<p>√</p> <p>√</p> <p>√</p> <p>√</p>	<p>√</p> <p>√</p> <p></p> <p></p>	
<p>Other Requirements (Essential)</p>	<p>Willingness and ability to travel to between Cardiff Metropolitan University (Llandaff Campus) and Yard Associates Ltd office in central Cardiff.</p> <p>*The appointment of the successful applicant will be subject to a Disclosure and Barring Service check (DBS, previously CRB).</p>		<p>√</p> <p>√</p>	

\*Please note that a criminal record may not necessarily be a bar to obtaining employment in Cardiff Metropolitan University. For further information on Disclosure and Barring Service (DBS, previously CRB) please go to <https://www.gov.uk/crb-criminal-records-bureau-check>