UWS UNIVERSITY OF THE WEST of SCOTLAND

Job Description & Person Specification

Academic and Research roles

JOB DESCRIPTION

Job title	Research Assistant
School/Department	CEPS
Division (if applicable)	Computing
Programme (if applicable)	
Location	Paisley
Reporting to	Professor, CEPS
UWS grade	AC1
FTE	1

Job summary

The University of the West of Scotland (UWS), in collaboration with University of KwaZulu-Natal (UKZN), the RCSI Faculty of Nursing and Midwifery, and University of Portsmouth, is undertaking the WEATHER project funded by the National Institute for Health and Care Research (NIHR). This project aims to develop a predictive warning system intervention (PWSi) to mitigate risks associated with Extreme Weather Events (EWE's) in KwaZulu-Natal, South Africa. Leveraging telecommunication networks, particularly 5G networks, the system will deliver timely warning alerts to communities, enabling proactive response measures and reducing the potential impact of EWEs. The project will involve working with international research groups and projects, working with other researchers and PHD students with access to professional training.

As a Research Assistant, you will play a vital role in the research project focused on predicting the outbreak of disease linked to extreme weather events through mathematical modeling and data-driven AI algorithms. Working under the guidance of Professor, Director of UWS Digital Connectivity and Innovation for Sustainable Futures, you will contribute to the design and development of predictive models using environmental data and health informatics. Your responsibilities will include conducting research, producing high quality research papers, analyzing data, and collaborating with research teams from collaborating institutions to advance our understanding of the relationship between extreme weather events and disease outbreaks. This role offers an exciting opportunity to contribute to cutting-edge research aimed at addressing challenges in public health and sustainability.

People & finance responsibilities

People	None
Finance	None

Key activities

- Design and develop AI algorithms for disease prediction based on environmental and health data.
- Support research algorithm development for rain/flood prediction and disease prediction.
- Assist in data collection and data management for the project.
- Contribute to the development of user interfaces for the delivery of alert system.
- Collaborate with research teams from collaborating institutions.
- Support MSc/PhD students as part of joint project deliverables.

Job scope

Planning and organising	- Plan and organise own work schedules within time frames, working on own initiative and prioritising workload to ensure completion of research tasks within project deadlines. - Be responsible for working to deadlines and to alerting principal researcher/s to progress against deadlines. - Participate in project team meetings and contribute to project planning and implementation. - Seek guidance on actions to cope with unforeseen disruption or delay to project. - Liaise with the key stakeholders online and offline as required
Decision making	- Deal with problems, as part of a team, which may affect the delivery or the achievement of research objectives and deadlines. - Contribute to decisions affecting the work of the team. - Analyse and interpret the results of research and contribute to the generation of outputs.
Working relationships – *Liaison and Networking*	The post will be based in the School of Computing, Engineering and Physical Sciences, Paisley Campus. The post holder will be expected to: - Collaborate with research teams from collaborating institutions. - Develop knowledge and understanding, and contacts for future collaboration where appropriate.
Working relationships – *Communication*	- Communicate effectively with team members and stakeholders. - Prepare reports and documentation as required.
Working relationships – *Teamwork*	- Work collaboratively with a multidisciplinary team. - Share knowledge and experience with colleagues.
Working relationships – *Pastoral Care*	- Support MSc/PhD students as part of joint project deliverables. - Provide guidance and mentorship as needed.

PERSON SPECIFICATION

Qualifications

			Evidence **A = Application** **I = Interview**
Essential	QE1 QE2	MSc or equivalent in in Electrical/Electronic Engineering or Computer Engineering/Science or Mathematics or related areas.	A
Desirable	QD1 QD2	PhD in Electrical/Electronic Engineering or Computer Engineering/Science or Mathematics or related areas.	A

Experience

			Evidence **A = Application** **I = Interview**
Essential	EE1 EE2	• Experience in development of AI/Machine learning algorithms with proven track record in using machine learning and artificial intelligence software libraries (e.g., Scikit-learn, TensorFlow, Keras). • Experience in technical writing (research publications) and preparation of reports.	A/I
Desirable	ED1 ED2	• Familiarity with IoT, AI, and data analytics in the areas of knowledge of environmental and health data. • Hands-on experience in database management systems (e.g., MySQL, SQL, NoSQL)	A/I

Skills

			Evidence **A = Application** **I = Interview**
Essential	SE1 SE2	• Strong analytical and problem-solving skills. • Proficiency in programming languages (e.g., Python, Java, C/C++, MATLAB).	A/I
Desirable	SD1 SD2	• Well-developed project management and research organisational skills. • Familiarity with IP and risk management.	A/I

Knowledge

			Evidence **A = Application** **I = Interview**
Essential	KE1	Proficiency in AI and data analytics.	A/I
Desirable	KD1	Understanding of environmental and health data.	A/I

Behaviours

			Evidence **A = Application** **I = Interview**
Essential	**BE1** **BE2**	• Excellent communication and interpersonal skills. • Ability to work independently and as part of a team. •	A/I
Desirable	**BD1** **BD2**	• Flexibility to adapt to changing environments. • Enthusiasm to learn new technologies.	A/I

Created/Updated (mm/yy):	