

# Job Description & Person Specification

Academic and Research roles

## JOB DESCRIPTION

<b>Job title</b>	Research Assistant in Blockchain-enabled smart farm supply chain
<b>School/Department</b>	School of Computing, Engineering and Physical Sciences, Delta lab, AVCN Research Institute
<b>Location</b>	Paisley Campus May be required to work with our collaborating partners and stakeholders in the UK and abroad from time to time to meet the requirements of the business
<b>Reporting to</b>	Professor
<b>UWS grade</b>	AC1

### Job summary

The postholder will conduct research work on the Integration of AI and Blockchain technology to develop Smart contract systems for a smart farm supply chain in collaboration with local and international partners and the EU funded projects. The postholder will co-lead the development of integrated prototypes empowered by emerging technologies and intelligent algorithms for smart farming operations and supply chain, based on analysis of sensor data collected from farm sites. The postholder will be expected to collaborate closely with the project partners and assist in co-supervising research students working on related areas. The work under development will produce prototypes to be demonstrated in operational environments. This role also has responsibility for leading the writing up of deliverables for the project and research papers for publication and assisting in grant applications. The postholder may contribute to other projects wherever required.

### Key activities

- Co-lead the development of Blockchain-enabled smart contract systems for supply chain in smart farming context, meeting a set of technical requirements in operational environments, with other researchers.
- Actively collaborate with project partners in data collection, system prototyping and integration etc.
- Co-lead the investigation of the key areas of the project, including data analysis and decision making, Blockchain and AI integration, and testing with support from other members of the project team.
- Prepare software and documentation, technical reports and deliverables, academic papers, and contribute to other dissemination/exploration activities, all on time according to the project plan
- Represent the UWS team in some technical meetings held within the UK, abroad and/or online
- Disseminate the research outputs to the academic and industry communities through publications in international journals and conferences, and demos/posters in relevant events
- Support the project team in related scholarly activities and assist postgraduate research students where necessary

- Support the project team in activities related to income generation (demonstration events, writing project proposals, etc)

## Job scope

<p><b>Planning and organising</b></p>	<p>The work associated with this post will be initially specified but may be subject to change depending on the outcomes of the research work and the strategies of the project team. The successful postholder will need to identify priorities on the assigned tasks and achieve results according to them.</p> <p>On a day-to-day basis, the postholder will be required to make decisions and use his/her professional judgement in relation to his/her duties. Any significant changes in the schedule will be discussed and agreed upon with the line manager and the project team.</p> <p>The postholder will be required to use his/her knowledge and experience with Blockchain, smart contract development, AI/ML algorithms, supply chain, smart farming and related subjects to conduct the research.</p> <p>The postholder will work closely, on a daily basis with other researchers and PhD students, who will support the postholder with his R&amp;D activities. The post holder, will support the development of the PhD students, and the team.</p> <p>The postholder will be expected to interact extensively with the project partners officially on the project for the business of this project.</p>
<p><b>Working relationships</b></p>	<p>The postholder will be part of the UWS team. The RA will work independently as well as work with the UWS team including the project supervision team, and other researchers. The RA will be jointly supervised by the project supervision team and meet the team regularly to report and discuss the progress. The postholder's daily research activities will be managed by the supervision team, and a formal weekly meeting will be held. The postholder will be required to work with the project partners and other UWS research staff and students as necessary.</p>

# PERSON SPECIFICATION

## Qualifications

			Evidence A = Application I = Interview
Essential	QE1 QE2	<ul style="list-style-type: none"> <li>Masters or above degree in Computer Science, Blockchain-enabled Smart Contract, Artificial Intelligence, Smart Farming, Blockchain-enabled Supply Chain, or other closely related areas</li> </ul>	

## Experience

			Evidence A = Application I = Interview
Essential	EE1 EE2	<ul style="list-style-type: none"> <li>Experience in developing blockchain and smart contract platform-based systems</li> <li>Experience in software development</li> <li>Demonstrable experience in smart farming technologies and supply chain prototyping</li> <li>Demonstrable experience in integration of Blockchain and AI technologies</li> <li>Demonstrated experience delivering oral presentations at conferences, workshops, and meetings</li> </ul>	
Desirable	ED1 ED2	<ul style="list-style-type: none"> <li>Experience in learning platform development</li> <li>Experience in big data analytics and machine learning</li> <li>Experience of working with/in industry</li> <li>Experience in external funding applications</li> </ul>	

## Skills

			Evidence A = Application I = Interview
Essential	SE1 SE2	<ul style="list-style-type: none"> <li>Experience in using related data analysis, AI or machine learning platforms (e.g., MS Power BI, Fuzzy toolbox, TensorFlow)</li> <li>Proficiency in other computer programming languages like Python, Java, C, C++, etc .</li> </ul>	
Desirable	SD1 SD2	<ul style="list-style-type: none"> <li>Proficiency in developing blockchain-enabled smart contracts using related Programming platforms or tools: e.g., Remix, Solidity, Ethereum, Hyperledger etc</li> </ul>	

## Knowledge

			Evidence A = Application I = Interview
Essential	KE1 KE2	<ul style="list-style-type: none"> <li>Proven knowledge of related smart farming technologies and supply chain platforms</li> </ul>	

<b>Desirable</b>	<b>KD1 KD2</b>	<ul style="list-style-type: none"> <li>• Knowledge of research project management</li> </ul>	
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**Behaviours**

			<b>Evidence</b> A = Application I = Interview
<b>Essential</b>	<b>BE1 BE2</b>	<ul style="list-style-type: none"> <li>• A well-developed aptitude for self-learning and improving his/her skills by his/her own.</li> <li>• A well-developed aptitude for carrying out independent work and taking own architecture and design decisions over both research aspects and software development aspects.</li> <li>• Excellent organisational skills with the ability to plan under own initiative and work to specific deadlines.</li> <li>• Ability to work independently and also as part of a team</li> <li>• Ability to be organised and self-motivated</li> <li>• Ability to communicate and share ideas</li> <li>• Ability to meet deadlines</li> <li>• Attention to detail and accuracy</li> </ul>	

<b>Created/Updated (mm/yy):</b>	<b>18/03/2024</b>
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