Post Title: Research Associate

This position forms part of a Knowledge Transfer Partnership (KTP) funded by Innovate UK. As a KTP Associate you will work within Ashley's Strawberry Farms to develop and embed new know-how through this innovation project, with research and academic support from Nottingham Trent University and Covenant University as the knowledge bases. KTPs offer the ideal opportunity to apply your degree through real work and springboard your career. Read more about the scheme here: www.ktp-uk.org

Job Description:

This role is part of a collaborative knowledge transfer partnership (KTP) between NTU and Covenant University, Ashley's Strawberry Farm. This exciting new project will optimise growth conditions of Strawberries using sensors and algorithms, enhancing the efficiency of irrigation, and improving the sustainability of farming practices. To achieve these goals, we want the KTP associate to embed expertise from Nottingham Trent University and leverage state-of-the-art Artificial Intelligence (AI) algorithms and technology to optimise farming practices and improve the yield of strawberries. The Associate must be able to collaborate effectively with multiple stakeholders and be adaptable to new technologies and methodologies as required.

Principal duties and responsibilities: The overall purpose of the KTP associate role is to lead the successful integration of cutting-edge technology and academic expertise into the local farming context, driving sustainable and profitable strawberry cultivation for Ashley's Strawberry Farm through the SmartBerry project. Specific steps of the project will include:

1. Collaborate with the academic and business teams to understand the objectives and requirements of the SmartBerry project.
2. Conduct research and analysis on the use of sensors, IoT devices, machine learning, and artificial intelligence in precision agriculture, specifically focusing on strawberry cultivation.
3. Design and implement data acquisition systems to collect real-time data on environmental and soil variables using sensors and IoT devices.
4. Develop and apply machine learning algorithms and statistical analysis techniques to analyse the collected data and extract meaningful insights for optimising crop growth and improving yields.
5. Collaborate with the farmer and other stakeholders to understand the local farming context, including environmental and soil variables, and incorporate this knowledge into the design and deployment of the SmartBerry technology.
6. Assist in the deployment and maintenance of the sensor network and IoT devices at the farm, ensuring their proper functioning and data collection.
7. Collaborate with the academic team to develop data-driven models and decision support systems that provide recommendations and insights to farmers for better crop management and resource optimization.
8. Document project activities, methodologies, and findings, and prepare reports and presentations to communicate the progress and outcomes of the SmartBerry project to the academics and business teams.

N.B. This role will require some domestic and international travel The post-holder may be required to undertake any other duties which may reasonably be required as within the nature of the duties and responsibilities of the post as defined,

subject to the proviso that normally any changes of a permanent nature shall be incorporated into the job description in specific terms.

Essential Skills and Qualification:

- A degree in Computer Science, Electrical/Electronic Engineering, or a related field.

- A postgraduate degree in a relevant field would be an added advantage.

- Significant experience with data science, machine learning, AI, or related fields; some experience with embedded devices, sensors and IoT devices; embedded devices, sensors and IoT devices, design, and construction

- Significant knowledge of software design & development; Proficiency in one or more programming language(s) (such as Python, Java, etc.); Multi-user, multi-site database; Data analysis and data management skills

- Strong appetite for research, enquiry and critical thinking; Highly motivated and determined to succeed Reliable and conscientious; Ability to work independently as part of an international team; Willingness to learn and adapt to new technologies including agriculture; Excellent interpersonal and written and spoken communication skills; Written and verbal communication needs to be clear, well-structured and easy to understand; Strong prioritisation, organisation and time management skills with a drive to lead and deliver the project.

Desirable Skills:

- Professional certification in a related field; Knowledge of SQL/No SQL Server database; Cloud computing platforms such as AWS or Azure; Big data infrastructure; Electronics and device circuitry

- Experience in a related field; Experience working on interdisciplinary research projects; Experience in project management; Experience working on agricultural projects will be an advantage.

How to apply:

To apply please fill out the Google form - https://forms.gle/zom21Z5vqyAsnqX79. You will be required to complete your essential personal details, state how you meet the essential and desirable criteria for this post and attach a CV and cover letter by the closing date of 30 September 2023.

The interviews will be held on a date to be communicated with shortlisted candidates.