School of Design and Creative Arts
Aujla Business Systems Limited
Job Ref: REQ240892

Job title: Human-Centred Design KTP Associate

Period: 30 months
Salary: Between £33,000 and £36,000 per annum at a starting salary to be confirmed on offer of appointment. The successful applicant will also receive a £2,000 per annum training budget.
Key Words: User Experience, VR, Drones, Service, Design, Human Factors
Application Deadline: Wednesday 16ᵗʰ October 2024

Project Title: To develop a simulator enabling commercially viable last-mile delivery in rural and semi-urban environments using autonomous Unmanned Aircraft Systems.

About the Project

This is a 30-month Knowledge Transfer Partnership (KTP) project between Loughborough University and Aujla Business Systems Limited, funded by UKRI Innovate UK.

Global society is rapidly adopting autonomous systems across industry and public life. This requires novel ways for citizens and organisations to envisage what this new future might look like when it becomes part of everyday life. This KTP will produce an interactive simulator to visualise the integration of Unmanned Aircraft Systems (UAS - more colloquially referred to as drones) for last-mile delivery in rural and semi-urban environments. The delivery contexts could be wide-ranging (e.g. medical, retail) and the simulator will empower affected officials, businesses, and citizens to envisage, plan and manage the implementation of UAS.

This interactive simulator – the Autonomous Infrastructure Simulator (AIS) - will be developed by Aujla Business Systems Limited (ABS), which has a foundation in software architecture, intelligent city data, and digital security. To ensure compatibility with the needs of citizen stakeholders (members of the public with an interest in their local environment) and customer stakeholders (as part of their job role, e.g. local authorities and healthcare providers), ABS will leverage Loughborough University's academic knowledge on human-centred design.

Through long-standing UK local authorities and NHS contracts, ABS is uniquely positioned to access invaluable data and testbeds. ABS is also partnered with the NHS Innovation scheme, which ensures that vital stakeholders are accessible to the Project for consultation, design, testing and product development. The KTP will leverage these relationships to produce market-ready solutions.

KTP Associate Role

The KTP Associate will be based primarily at Aujla Business Systems Ltd, in Farnborough, Hampshire as well as Loughborough University with the academic team. The Associate will be supervised by an academic team, led by Dr Tracy Ross and Dr Chris Parker, who are experts in human-centred design and UX design.

A Knowledge Transfer Partnership (KTP) is a unique collaborative partnership between businesses and universities to create a positive impact and drive innovation. The KTP Associate works with the business to implement innovative solutions to identified business challenges, using the knowledge and expertise gained through their academic training. The academic partner (Loughborough University) supports and guides the KTP Associate throughout the project.

The Associate will be required to engage with citizens, customers and internal (ABS) stakeholders; critically evaluate their (potentially) conflicting needs for the Autonomous Infrastructure Simulator (AIS); distil these into human-centred requirements specifications; work with ABS to translate these into an initial prototype and iteratively evaluate and redesign this prototype to enable ABS to produce the final design of the AIS.

The Associate will be required to develop novel ways to engage citizens and customers with not-yet-experienced future innovations in meaningful ways and to work closely with ABS staff to ensure a legacy for this methodological knowledge within the company. The Associate will work closely with ABS software developers to understand the technical limitations of ABS software and how these might impact stakeholder requirements.

The Associate will need to adopt an agile mindset and working methods to bring together the external (citizen, customer) requirements - likely to be diverse, multi-layered, conflicting, and ambiguous - with the need for a commercially driven process, pivoting design direction as required. Training will be provided in agile methodologies.

Introduction to ABS
ABS is a Managed Services Provider specializing in IT and security solutions. Core services comprise IT management, infrastructure hardware, cybersecurity, communication systems, cloud hosting, custom application development, and connectivity services. ABS caters to both public and private sectors, with a focus on smart city infrastructure, cloud-based operations and bespoke software solutions tailored to specific business needs.

Loughborough University
Loughborough University is ranked in the top ten in the most recent Complete University Guide Guardian League Table and the Times Good University Guide. It has been awarded a record of seven Queen's Anniversary prizes for its research impact on society and the UK industry. It is somewhere anyone can realise their full potential. Loughborough University prides itself on the real-world context behind its teaching, enterprise, and research initiatives.

School of Design and Creative Arts

Notably, Loughborough is one of the UK's top Universities for User Experience, Product Design, and Graphic Design, ranking in the UK's top five for Art and Design. The School of Design and Creative Arts (SDCA) strives to create physical and digital experiences and interactions that are meaningful and beneficial for our society, culture, economy, and the environment.

A blend of creativity, ethics and rigour for real-world benefit are at the heart of the School; a collaborative, hands-on, creative, and industrious community of staff and students who are passionate about using design and arts for universal benefit. Bringing together its renowned expertise from across its disciplines, the School is committed to facilitating societal change and providing viable and innovative solutions to contemporary challenges at national and international levels, at which it proudly maintains strong, lasting links with its industry partners and alumni.

Job Description and Person Specification

Job Grade: Other

Job Purpose
The KTP Associate will:
- Review state-of-the-art knowledge for the human-centred design of the simulator, drawing on research in citizen engagement, unmanned flight and urban planning.
- Engage with stakeholders, including citizens, local authorities and healthcare providers, to determine user requirements for the simulator, involving ABS staff in this activity.
- Collaborate with ABS to design and evaluate the service through prototypes, increasing fidelity from concept to low, medium, and high fidelity, resulting in the final ABS simulator.
- Document work regularly, ensuring knowledge and outcomes are transferred to other team members, and embedded HCD knowledge within the company, creating a knowledge repository throughout the project.
- Organise presentations and workshops with ABS staff to transfer and embed HCD knowledge in the company.
- Provide project updates at supervision meetings, LMCs, advisory panel meetings, and other necessary forms of engagement and dissemination.

Job Duties
- Develop and innovate.
- Carry out the KTP project tasks and deliver the outcomes outlined in the project workplan.
- Manage the project and disseminate key deliverables/findings to the project team and key stakeholders to facilitate the progress of the digital product.
- Managing the project budget.
- Undertake KTP management training, personal development training, and courses as deemed necessary.
- Prepare research papers for publication in journals/conferences in line with the expected scholarly activities of the University Research Staff and in accordance with the sensitivity of collaborating companies.
- Travel to company business partners within the UK.
- To undertake such other duties as may be reasonably requested and commensurate with the nature and grade of the post.

Points to Note
The purpose of this job description is to indicate the general level of duties and responsibilities of the post. The detailed duties may vary from time to time without changing the general character or level of responsibility entailed.

Previous KTP Associates or employees of Aujla Business Systems Limited are ineligible to apply for this KTP.

Applicants must have completed their last qualification (degree, masters, PhD) no more than five years before the closing date.

Special Conditions
All staff have a statutory responsibility to take reasonable care of themselves, others and the environment and to prevent harm by their acts or omissions. All staff are therefore required to adhere to the University's Health, Safety and Environmental Policy and Procedures.

All staff should hold a duty and commitment to always observe Loughborough University's Equality & Diversity policy and procedures. Duties must be carried out in accordance with relevant Equality & Diversity legislation and University policies/procedures.

Successful completion of probation will be dependent on attendance at the University's mandatory courses, which include Respecting Diversity and, where appropriate, Recruitment and Selection.

Organisational Responsibility

Reports to the KTP Lead Academics: Dr Tracy Ross   (t.ross@lboro.ac.uk)
                                       Dr Chris Parker (c.parker@lboro.ac.uk)

Person Specification

The successful candidate will be a highly motivated individual qualified in a relevant subject to a minimum of a Bachelors or Masters' level. They will have excellent knowledge of their subject domain, ideally with postgraduate qualification at Master's or a viva passed at PhD level.

The candidate should have transferable skills enabling them to work effectively with others in a business environment. The Associate will effectively manage business leaders and stakeholders working with end-users in a fast-moving commercial environment. Experience working in a professional setting, transferring information and engaging diverse stakeholders is desirable.

Your application will be reviewed against the essential and desirable criteria listed below. Applicants are strongly advised to explicitly state and provide evidence of how they meet each of the essential (and desirable) criteria in their application. Stages of assessment are as follows:

1 – Application
2 – Presentation
3 – Interview

Essential Criteria

Area	Criteria	Stage
Expertise	Demonstrates expertise in engaging with users to identify digital/service requirements	1, 2
	Demonstrates expertise in prototyping and testing digital/service interactions using qualitative and quantitative research methods.	1, 2
Skills and abilities	Demonstrates the ability to comprehend new business operations and industrial sectors	1, 3
	Ability to work both independently and as part of a team	1, 3
	High levels of self-direction, with ability to coordinate project activities, manage project tasks, prioritise and meet deadlines	1, 3

	Excellent written, visual and oral communication skills – including writing for, and presenting to, academic and/or professional audiences	1, 2, 3
	Good IT skills	1
	Awareness of safe and ethical research practices.	1, 3
Training	Motivated to undertake training modules and bespoke training as appropriate for personal and professional development	1, 3
Qualifications	Masters level qualification in a relevant Human-Centred Design discipline	1
Other	To always observe the University's Mandatory Training and Equal Opportunities policies	1
	Willingness and ability to travel	1

Desirable Criteria

Area	Criteria	Stage
Knowledge	Knowledge of one or more of the technical and application domains, i.e. urban planning, unmanned flight, software development, and healthcare.	1, 3
Experience	Working on research and development projects	1, 3
	Conducting industry-relevant research that has been published in high-quality conferences or journals	1
	Project management, including significant budget handling	1, 3
Qualifications	Graduate (or higher) member of the Chartered Institute of Ergonomics and Human Factors (CIEHF)	1
	Licenced to drive in the UK	1

Conditions of Service

The position is FULL TIME and FIXED TERM for 30 months. Between £33,000 and £36,000 per annum at a starting salary to be confirmed on offer of appointment. The successful applicant will also receive a £2,000 per annum training budget.

The appointment will be subject to the University's normal Terms and Conditions of Employment for Academic and Related staff/Operational and Administrative staff, details of which can be found here.

We strive to create a culture that supports equality and celebrates diversity throughout the campus. The University holds a Bronze Athena SWAN award, which recognises the importance of supporting women at all stages of their academic careers. For further information on Athena SWAN, see http://www.lboro.ac.uk/services/hr/athena-swan/.