Job Description

Job title	Research Assistant Neurotechnology VR/AR/Neurogaming Applications
Department/School	Bath Institute for the Augmented Human Department of Computer Science
Job family	Education and Research
Grade	6
Salary	£29,605 to £36,024, depending on experience
Working arrangement	Fixed term to 1.5 years @ 1.0 FTE
Reporting to	Prof Damien Coyle, Professor of Neurotechnology and Director of the Bath Institute for the Augmented Human
Responsible for	There may be a requirement for day to day supervision of other staff e.g., technical staff or, co-supervision of doctoral or undergraduate students.
Location	University of Bath campus (Claverton Down or Bath City sites).

Background and context

The neurotechnology research at Bath led by Prof Damien Coyle aims to develop new AI approaches to address challenges associated with translating electrophysiological signals into control signals for brain-computer interface (BCI) based neurotechnology and to trial these developments on a large scale with end-users. To facilitate learning and engaging users on large scale there is a necessity to develop paradigms that are immersive and engaging (gamified) and trial these with end-users. This project offers an exciting opportunity for a researcher with experience in developing VR/AR paradigms for brain-computer interface R&D and/or neurogaming research.

Working alongside Prof Damien Coyle and the team associated with a Turing AI Fellowship held by Prof Coyle at the Bath Institute for the Augmented Human, the Research Associate will be responsible for developing novel paradigms and applications for engaging end-users as they learn to control a brain-computer interface and neurotechnology applications e.g., for alternative or augmentative communication technology, for enhancing performance in sport or at work or for entertainment (neurogaming). Working with trials managers and AI experts the successful candidate will contribute to EEG-based brain-computer interface research trials involving human participants to trial new paradigms in the lab with able-bodied participants and with patients who have prolonged disorders of conscious and/or physical impairments resulting from injury or disease. Experiment and trials will be conducted at the Bath Institute for the Augmented Human and at multiple partner sites across the UK as part of large national clinical trial.

The post holder will be expected to have demonstrable experience of Visual Studio Software Development Environment and Unity3d Games Development Studio (or similar) and experience of working in an engineering and/or computing environment to include relevant work experience or a games development portfolio.

Experience optimising the performance of software VR/AR/games development for applications such as brain-computer interfacing is desirable.

The post-holder will contribute to planning of research experiments involving human participants, managing and analysing data, developing software and technologies for experiments and prototyping real-time AI solutions and neurogaming concepts, and will be expected to contribute to publishing the results of the research in high impact journal publications. The post-holder will work with AI experts, engineers, neuroscientists, psychologists, trials managers and neuroimaging experts.

The post may involve travel, extended stays away from campus, arranging travel and management of travel expenses and may involve access to own transport.

Job purpose

To provide subject-specific research expertise and undertake specific research work to a Principal Investigator (PI)/Co-Investigator (CI) and their research team for a specified grant/project.

Main duties and responsibilities

1	Assist with research by typically (*as appropriate to discipline*): • preparing, conducting and recording the outcome of field work; • developing questionnaires and conducting surveys • conducting literature and database searches
2	Provide support to PI and other research staff with project management (for example, organising meetings and corresponding with partners).
3	Contribute to the production of research reports and publications.
4	Participate regularly in group meetings and prepare and deliver presentations to research team.
5	Assist with supervising undergraduate student projects.
6	Continually update knowledge and understanding in field or specialism to inform research activity.

You will from time to time be required to undertake other duties of a similar nature as reasonably required by your line manager. You are required to follow all University policies and procedures at all times and take account of University guidance.

Person Specification

Criteria	Essential	Desirable
Qualifications and Training		
A first degree (BA/BSc) in a subject relevant to the research activity.	√	
Masters level qualification.		√
Knowledge and Experience		
Relevant work experience in a related area to the project.		√
Demonstrated depth and breadth of specialist knowledge of subject matter to effectively contribute to the research programme.	√	
Demonstrated awareness of latest developments in the field of research.	√	
Skills		
Ability to organise and prioritise own workload to meet required deadlines.	√	
Ability to write research reports and to effectively disseminate outcomes.	√	
Excellent verbal, interpersonal and written communication skills.	√	
Highly competent in IT packages as appropriate to discipline/area of research.	√	
Attributes		

Commitment to working within professional and ethical codes of conduct.	√	
Innovation and developing creative solutions.	√	
Self-confidence when communicating with a wide range of stakeholders.	√	
Commitment to safe working practices.	√	
Ability to work independently.	√	
Commitment to excellence in research.	√	
Ability to be an effective team worker.	√	