Job Description and Person Specification

January 2024

JOB DESCRIPTION

Post title:	**Research Fellow in Efficient Machine Learning Systems**
Academic Unit/Service:	Electronics and Computer Science
Faculty:	Faculty of Engineering and Physical Sciences
Career Pathway:	Education, Research and Enterprise (ERE) — Level: 4
*ERE category:	Research pathway
Posts responsible to:	Dr Jagmohan Chauhan and Dr Alex Weddell
Posts responsible for:	N/A
Post base:	Office-based

Job purpose
To undertake research in accordance with the specified research project under the supervision of the grant award holders. To undertake leadership, management, and engagement activities.

Key accountabilities/primary responsibilities	% Time
1. To develop and carry out the research indicated in the research project.	75 %
2. Regularly disseminate findings by taking charge of preparing publication materials for referred journals, presenting results at conferences, or exhibiting work at other appropriate events, regular meetings with external collaborators.	10 %
3. To develop and carry out an area of personal research.	15%
4. Supervise the work of junior research staff.	
5. Any other duties as allocated by the line manager following consultation with the post holder	
6. Carry out occasional undergraduate supervision, demonstrating or lecturing duties within own area of expertise, under the direct guidance of a member of departmental academic staff	

Internal and external relationships
Direct responsibility to holder of research award. Other members of the department/University staff. External collaborators.

Special Requirements
To attend national, international conferences and organizing workshops/ demos for the purpose of disseminating research results. *Applications for Research Fellow positions will be considered from candidates who are working towards or nearing completion of a relevant PhD qualification. The title of Research Fellow will be applied upon successful completion of the PhD. Prior to the qualification being awarded the title of **Senior Research Assistant** will be given.*

PERSON SPECIFICATION

Criteria	Essential	Desirable	How to be assessed
Qualifications, knowledge and experience	PhD degree in Computer Science or Electronic Engineering. Knowledge and experience in computer vision, machine learning, embedded systems, or a closely related field. Knowledge and experience in programming embedded hardware – such as MCUs, DSPs, and FPGAs. Understanding of how to implement specialist ideas into code. Knowledge and experience in machine learning frameworks and developing ML projects.	Knowledge and Experience in Graph Neural Networks. Knowledge in indexing, and information retrieval. Knowledge in Recommender Systems.	CV + Interview
Planning and organising	Able to organise own research activities to deadline and quality standards. Able to operate within the framework of a project plan.	Experience of project management.	Interview
Problem solving and initiative	Able to develop understanding of complex problems and apply in-depth knowledge to address them. Able to develop original techniques/methods.		Interview
Management and teamwork	Able to mentor junior research staff. Able to proactively work with colleagues in other universities to achieve outcomes. Confident to raise issues early and support project re-planning / pivot etc.		Interview
Communicating and influencing	Communicate new and complex information effectively, both verbally and in writing.		CV + Interview

	Able to present research results at group meetings and conferences.		
	Able to write up research results for publication in high quality peer-viewed journals.		
Other skills and behaviours	Positive attitude to colleagues and students.		Interview + Reference Letters
	Proactive in promoting a working environment that is inclusive and engaging; recognising the value diversity brings.		
	Understanding of relevant Health & Safety issues.		

JOB HAZARD ANALYSIS

Is this an office-based post?

☒ Yes	If this post is an office-based job with routine office hazards (eg: use of VDU), no further information needs to be supplied. Do not complete the section below.
☐ No	If this post is not office-based or has some hazards other than routine office (eg: more than use of VDU) please complete the assessment below.
	Hiring managers are asked to complete this section as accurately as possible to ensure the safety of the post-holder.

- HR will send a full PEHQ to all applicants for this position. Please note, if full health clearance is required for a role, this will apply to all individuals, including existing members of staff.

ENVIRONMENTAL EXPOSURES	Occasionally (<30% of time)	Frequently (30-60% of time)	Constantly (> 60% of time)
Outside work			
Extremes of temperature (eg: fridge/ furnace)			
## Potential for exposure to body fluids			
## Noise (greater than 80 dba - 8 hrs twa)			
## Exposure to hazardous substances (eg: solvents, liquids, dust, fumes, biohazards). Specify below:			
Frequent hand washing			
Ionising radiation			
EQUIPMENT/TOOLS/MACHINES USED			
## Food handling			
## Driving university vehicles(eg: car/van/LGV/PCV)			
## Use of latex gloves (prohibited unless specific clinical necessity)			
## Vibrating tools (eg: strimmers, hammer drill, lawnmowers)			
PHYSICAL ABILITIES			
Load manual handling			
Repetitive crouching/kneeling/stooping			
Repetitive pulling/pushing			
Repetitive lifting			
Standing for prolonged periods			
Repetitive climbing (ie: steps, stools, ladders, stairs)			
Fine motor grips (eg: pipetting)			
Gross motor grips			

Repetitive reaching below shoulder height			
Repetitive reaching at shoulder height			
Repetitive reaching above shoulder height			
PSYCHOSOCIAL ISSUES			
Face to face contact with public			
Lone working			
## Shift work/night work/on call duties			