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| January 2023 |  |

**JOB DESCRIPTION**

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| Post title: | **Research Fellow in Machine Learning for Early Diagnosis of Dementia** |
| 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: | Principle Investigator |
| Posts responsible for: | Research in the application of machine learning algorithms |
| Post base: | Office-based |

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| Job purpose |
| To undertake research in accordance with the specified research project under the supervision of the award holder. To contribute to scholarship in an inter-disciplinary setting. |

| Key accountabilities/primary responsibilities | % Time |
| --- | --- |
|  | To develop and carry out the research indicated in the research project. | 70 % |
|  | 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 collaborators.  | 10 % |
|  | To develop and carry out an area of personal research. | 15%5% |
|  | Help in the supervision of post-graduate researchers, where appropriate. |
|  | Undertake occasional teaching at undergraduate / MSc levels |
|  | 1. Other duties as arising from discussion with line manager and Head of School
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| Internal and external relationships |
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| Direct responsibility to holder of research award/PI. Other members of the department/University staff.External collaborators.  |

| Special Requirements |
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| 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**

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| Criteria | Essential | Desirable | How to be assessed |
| Qualifications, knowledge and experience | PhD degree in a relevant discipline: Computer Science, Electrical and Electronics Engineering, Mathematics or Statistics.Experience in a relevant technical field, e.g., machine learning, deep learning or, broadly, statistical inference. Good programming skills | Experience with signal processing techniques. | 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 in an inter-disciplinary research environment. | 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 supervise work of junior research staff.Able to proactively work with colleagues in other work areas 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.Able to present research results at group meetings and conferences.Able to write up research results for publication in high quality peer-viewed journals. |  | CV + Interview |
| Other skills and behaviours | Positive attitude to colleagues and students.Proactive in promoting a working environment that is inclusive and engaging; recognising the value diversity brings.Understanding of relevant Health & Safety issues. |  | Interview + Reference Letters |

**JOB HAZARD ANALYSIS**

**Is this an office-based post?**

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| [x]  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.

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| **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  |  |  |  |