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| Last updated: | <date> |

**JOB DESCRIPTION**

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| Post title: | **Research Fellow in AI For Good** | | |
| Academic Unit/Service: | School of Electronics and Computer Science | | |
| Faculty: | Faculty of Engineering and Physical Science |  |  |
| Career pathway: | Education, Research and Enterprise (ERE) | Level: | 4 |
| \*ERE category: | Research | | |
| Posts responsible to: | Principal Investigator | | |
| Posts responsible for: | n/a | | |
| Post base: | Office-based | | |

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| Job purpose |
| The role will be part of the Responsible AI (RAI) UK which is a national research and innovation programme led by the University of Southampton, with University of Nottingham and King’s College London as core partners. The Responsible AI UK programme is a £31M strategic investment by the UK Government to create an international ecosystem for responsible AI research and innovation (for more details, see [www.rai.ac.uk](http://www.rai.ac.uk/)).  The role will involve carrying out multidisciplinary research to enable responsible and trustworthy AI to power benefits for everyday life. This will not only include developing AI systems for good purposes/uses, but moving beyond that by addressing the sustainability of developing and using AI systems in and of themselves. This will involve bringing a change in the entire lifecycle of AI products (i.e., idea generation,  training, re-tuning, implementation, governance etc) towards greater ecological integrity, and social and economic justice. The multidisciplinary research will be focused on addressing the whole sociotechnical system of AI. It will involve responsible design, development and deployment of AI techniques which will be compatible with sustaining environmental resources for current and future generations; economic models for societies; and societal values that are fundamental to a given society. Some potential applications are healthcare, transportation, defence and security, and creative industries among others.    The role holder will be expected to undertake independent research as well as working as part of a team - this will include using approaches or methodologies and techniques appropriate to the type of research, and being responsible for writing up their work in order to contribute to published outcomes. The role holder will aim to develop case-studies based on their research in order to foreground the research questions around the responsible design, development and deployment of AI systems, while taking into account the legal, social and ethical aspects.  Work will need to be carried out in a multi-disciplinary setting involving experts and researchers from fields such as healthcare, law, engineering, business, and policy. Hence it will be important to be able to communicate research outputs in a way that is understandable and useful to researchers from diverse disciplines.  Applications for Research Fellow positions will be considered from candidates who are within six months 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. |

| Key accountabilities/primary responsibilities | | % Time |
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|  | To engage in high quality interdisciplinary research in the area of responsible AI, which may include focus into primary areas such as deep learning, explainable AI, causal reasoning etc. while taking into account the legal, social and ethical aspects for responsible design, development and deployment of trustworthy AI systems. | 55% |
|  | To establish a national and international reputation through regular peer-reviewed dissemination across top conferences and journals relevant to the responsible AI systems agenda, including but not limited to deep learning, explainable AI, causal reasoning etc. | 10 % |
|  | Support the development of case studies in collaboration with Responsible AI UK partners. | 10% |
|  | Responsible for the organisation of workshops, working with the Responsible AI UK operations team to support specific RAI UK committees (e.g., Equities committee or Research committee). | 10 % |
|  | Present work at venues (conferences and exhibitions) with more exposure to industry. | 5 % |
|  | Contribute to the process of securing further funding and assist the project CEO in management. | 5 % |
|  | Any other duties as allocated by the line manager following consultation with the post holder | 5 % |

| Internal and external relationships |
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| * Responsibility to the RAI UK CEO. * Responsibility for liaison with sponsors and external funding bodies * Working with collaborators from the three core universities (University of Nottingham, King’s College London and the University of Southampton) and other RAI UK partner universities. |

**PERSON SPECIFICATION**

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| Criteria | Essential | Desirable | How to be assessed |
| Qualifications, knowledge and experience | PhD or equivalent professional qualifications and experience in AI (deep learning, explainable AI, causal reasoning etc)  A track record of good publications at relevant international venues (conferences, journals) |  | CV or research portfolio |
| Planning and organising | Able to organise own research activities to deadline and quality standards |  | CV or research portfolio |
| Problem solving and initiative | Ability to design and develop algorithms, models, data analytics, and testbeds. | Skills in algorithm design, model design, empirical methods, explainable AI, causal reasoning. | CV or research portfolio |
| Management and teamwork | Work effectively in a team, understanding the strengths and weaknesses of others to help teamwork development | Experience supervising masters or PhD students. | CV and interview |
| Communicating and influencing | Able to present research results at group meetings and research conferences.  Excellent written and oral skills.  Communicate new and complex information effectively, both verbally and in writing, engaging the interest and enthusiasm of the target audience | Maintain an up-to-date website, publish updates through public venues including social media.  Able to both lead and collaborate on writing up research results for publication in leading peer-reviewed conferences and journals | Interview and research portfolio |
| Other skills and behaviours | Understanding of relevant Health & Safety issues  Positive attitude to colleagues and research trial participants |  | Interview |
| Special requirements |  | Able to attend national and international conferences to present research results | Interview |

**JOB HAZARD ANALYSIS**

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

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| 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 analysis 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 |  | X |  |
| Lone working |  | X |  |
| ## Shift work/night work/on call duties |  |  |  |