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| Last updated: | 12 January 2018 |

**JOB DESCRIPTION**

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| Post title: | **Research Technician** | | |
| Academic Unit/Service: | Geography and Environment | | |
| Faculty: | Social, Human and Mathematical Sciences | | |
| Career Pathway: | Technical and Experimental (TAE) | Level: | 3 |
| \*ERE category: | n/a | | |
| Posts responsible to: | GRID3 country scientific leads | | |
| Posts responsible for: |  | | |
| Post base: | Office-based | | |

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| Job purpose |
| To undertake GIS data analysis in accordance with the Gates Foundation award that funds analyses and mapping of population numbers and demographics in low income countries. |

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| Key accountabilities/primary responsibilities | | % Time |
|  | Assembling, processing and harmonizing GIS datasets from governments and other organizations to feed into population distribution modelling. | 20% |
|  | Assembling and processing large raster datasets for use in population distribution modelling. | 20 % |
|  | Processing and analysing GIS datasets on population age/sex structures from geolocated household surveys | 10 % |
|  | Processing GIS boundary files to ensure errors are corrected and can be input to statistical modelling processes | 10 % |
|  | Undertaking basic processing of the output modelled datasets to construct high resolution age and sex structured population datasets | 10 % |
|  | Contributing to the design, planning and implementation of training in geospatial methods for governments in low income countries | 10% |
|  | Undertaking bespoke processing and GIS analyses in support of the GRID3 project | 5 % |
|  | Constructing dataset metadata reports and contributing to figure production and scientific manuscript and report writing | 5 % |
|  | Carry out administrative tasks associated with specified research funding, for example risk assessment of research activities, organisation of project meetings and documentation. | 5 % |
|  | Contribute to teaching/training run by the WorldPop group | 5 % |

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| Internal and external relationships |
| The role-holder will work under the supervision of a scientific leader within the WorldPop program at the Dept of Geography and Environment. The leader will provide direction and guidance for the work to be undertaken. The role-holder will collaborate closely with statistical modellers within the GRID3 project. |

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| Special Requirements |
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**PERSON SPECIFICATION**

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| Criteria | Essential | Desirable | How to be assessed |
| Qualifications, knowledge and experience | Undergraduate/Postgraduate degree with a specialisation in GIS or relevant industry experience with a particular focus on large raster datasets preferred  Experience of managing and processing large vector and raster datasets.  Experience of automating the processing of vector and raster datasets  Experience assembling, processing and harmonizing GIS raster and vector datasets. | Knowledge and experience of working with demographic data (census, household survey)  Experience of building and managing geodatabases  Experience of teaching and training others in GIS  Experience in computer programming, using languages such as R or Python  Expertise in geospatial data visualization methods  Statistical modelling expertise | CV, cover letter, publications, interview |
| Planning and organising | Able to plan and prioritise a range of one’s own, and the team’s, standard and non-standard work activities.  Ability to successfully plan and deliver technical support of projects over a period of several months. |  | Application  /Interview |
| Problem solving and initiative | Experience of contributing innovative ideas in order to solve technical problems.  Experience of using judgement to find solutions to problems for which no standard procedure exist. |  | Application  /Interview |
| Management and teamwork | Experience of providing training/coaching to colleagues and students in relation to technical tasks  Able to solicit ideas and opinions to help form specific work plans.  Able to positively influence the way a team works together.  Able to ensure staff are clear about changing work priorities and service expectations. | Successful supervisory experience.  Ability to effectively allocate to, and check work of staff, coaching/ training and motivating staff as required. | Application  /Interview |
| Communicating and influencing | Able to elicit information to identify specific customer needs.  Able to offer proactive advice and guidance on technical processes and procedures.  Able to communicate and liaise with users of the technical services, both internal and external to the department.  Experience of demonstration skills |  | Application  /Interview |
| Other skills and behaviours |  |  |  |
| Special requirements | Willingness to undertake Health and Safety training specific to role.  Able and willing to travel to low income countries for meetings or contributing to GIS training |  | 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 |  |  |  |
| Lone working |  |  |  |
| ## Shift work/night work/on call duties |  |  |  |