

JOB DESCRIPTION

Job Title:	Research Fellow 2 (EPSRC project CHAI)	Grade:	AC2
Department:	School of Computing and Mathematical Sciences	Date of Job Evaluation:	October 2020
Role reports to:	Professor of Cyber Security		
Direct Reports	N/A		
Indirect Reports:	CHAI project partners, Faculty Staff and researchers		
Other Key contacts:			
<p>This role profile is non-contractual and provided for guidance. It will be updated and amended from time to time in accordance with the changing needs of the University and the requirements of the job.</p>			

PURPOSE OF ROLE:

This role relates to CHAI, a new £2.4 Million research project funded by EPSRC and led by the Internet of Things and Security (ISEC) Centre at the University of Greenwich, in collaboration with UCL, University of Bristol, Queen Mary University of London, and Reading University. CHAI aims to help the individual smart home user protect themselves against security risks in AI enabled environments. To achieve this, it develops cyber hygiene measures, including measures based on AI explainability, to help the user recognise signs of AI misbehaviour caused by cyber attacks. The measures themselves and an associate personalised training programme will be developed through a combination of a range of disciplines, including artificial intelligence, neuroscience, optimization, and co-design.

The particular role relates to the applied research and implementation required for developing the project's testbed and assessing the different cyber security risks on AI enabled smart home IoT devices.

This work will be carried out under the supervision of the Professor and Associate Professor of Cyber Security.

KEY ACCOUNTABILITIES:

Team Specific:

- To produce an experimental AI-enabled IoT device that will serve as testbed for the project's practical experimentation
- To contribute to the assessment of security threats on AI-enabled IoT devices
- To lead the development and deployment of the IoT devices that will be set up in the participating households for the project's "in the wild" experiments
- To contribute towards the communication of research findings, by participating in the preparation of high-impact journal publications
- To work under the supervision of the lead Researcher
- Communicate regularly with project partners to help with the integration of the techniques and AI explainability methods developed
- To contribute to the project's external communication and dissemination activities in workshops, conferences and other outreach events

Generic:

- Assist in achieving the Department/School's KPIs
- Contribute to department/school plans, activities, and efficient working practices
- Demonstrate a commitment to equality, diversity, and inclusion through engagement with University initiatives
- Promote your work and represent your discipline and the work of the University internally and externally, and take a proactive approach to ethical, good practice

Managing Self:

- Keep abreast of developments within the field and seek continuous improvement of own professional practice
- Actively participate in established professional development framework activities
- Behave in a manner which reflects the University values and creates a positive environment for work and study
- To work in a flexible manner, ensuring research outcomes are met
- Ability to work on own initiative, but to ask when needing support
- To work with others as part of a research team
- Ability to work to deadlines
- Ability to work on own initiative without constant supervision
- Ability to work accurately under pressure

Core Requirements:

- Adhere to and promote the University's policies on Equality and Diversity and Information Security;
- Ensure compliance with Health & Safety and Data Protection Legislation;
- Support and promote the University's Sustainability policies, including the Carbon Management Plan, and carry out duties in a resource efficient way, recognising the shared responsibility of minimising the university's negative environmental impacts wherever possible.

Additional Requirements:

- Any other duties commensurate with the post and grade as agreed with the Head of Department/School and the PVC of the Faculty.

KEY PERFORMANCE INDICATORS:

- Meeting project deliverable deadlines
- Preparation and publication of research findings in international peer-reviewed journals and conferences

KEY RELATIONSHIPS (Internal & External): (internal:) Professor of Cyber Security, Associate Professor in Cyber Security, as well as (external:) the principal investigators of our CHAI partners.

PERSON SPECIFICATION	
Essential	Desirable
<p>Experience</p> <ul style="list-style-type: none"> • Embedded systems, Jetson, Raspberry Pi4, Internet of Things development environments • High-impact research publications in areas related to the project • Student care and pastoral provision <p>Skills</p> <ul style="list-style-type: none"> • Highly competent software developer • Able to work to strict deadlines • Ability to both work independently and (where appropriate) as part of a team • Effective communication skills (including external audiences) • Outstanding organisational, IT communication and interpersonal skills <p>Qualifications</p> <ul style="list-style-type: none"> • PhD in Computer science, Engineering, or a related topic <p>Personal attributes</p> <ul style="list-style-type: none"> • We are looking for people who can help us deliver the values of the University of Greenwich: Excellence, Determination, Inclusivity, Ambition and Creativity 	<p>Experience</p> <ul style="list-style-type: none"> • Cyber security (intrusion detection or penetration testing) • Artificial intelligence (statistical machine learning or deep learning) <p>Skills</p> <ul style="list-style-type: none"> • Good technical writer <p>Qualifications</p> <ul style="list-style-type: none"> • Additional certifications in related areas <p>Personal attributes</p> <ul style="list-style-type: none"> • N/A