1 Advertisement

Post Title: Software Developer
School/department: Engineering and Informatics
Hours: full time or part time up to a maximum of 36.5 hours per week
Requests for flexible working options will be considered (subject to business need).
Contract: fixed term until 4 January 2023
Reference: 6398
Salary: starting at £30,046 to £33,797 per annum, pro rata (if part time)
Placed on: 16 July 2021
Closing date: 2 August 2021 Applications must be received by midnight of the closing date.
Expected start date: 23 August 2021

We are recruiting a research assistant to develop and evaluate interactive visualization tools for a project entitled Cybersecurity visualization: collaborative graphical tools for security policies. The project is a collaboration between the University of Sussex and Qatar University. The project is inventing novel approaches to supporting collaboration between managers who devise access control policies for computing resources and IT specialists who implement those policies digitally. Communication between managers and IT specialists is a substantial problem, because they use different technical languages and are unfamiliar with each other’s systems. To solve this problem the project is developing innovative graphical tools, interactive information visualizations. The visualizations will serve as a common medium for managers and IT specialists to share precise and detailed specifications of access control policies and to explore the implications for the security of digital resources. The tools will be underpinned by rich databases of simulated users and computing resources.

The post-holder’s primary role will be to implement research-prototype interactive visualization tools and the database of simulations users and resources, and to conduct rigorous evaluations of them. The post-holder will also contribute to the team effort in the overall design of the visualizations and user studies. You should have a degree in computer science, or equivalent, and demonstrable ability in the development and evaluation of software systems. Particularly desirable are experience of implementing interactive graphical user interfaces, or information visualizations, and skills in these languages and areas: JavaScript, Java, HTML5, PHP, databases, and HCI. Some knowledge of access control systems and practice would be advantageous.

You will be based at the University of Sussex, work under the supervision of Prof Peter Cheng, and be a member of the Representational Systems (RepSys) Laboratory within the Creative Technology Research Group. Locally you will work closely with members of the RepSys Lab, and at a distance you will collaborate with the team members in Qatar University. See here for the RepSys lab web pages:
http://users.sussex.ac.uk/~peterch/
When applying, please fill in the application form and attach a full CV. Use the space for additional information to explain how your skills are suited to the project, making reference to the essential and desirable sets of criteria outlined in the Job Description.

Please contact Professor Peter Cheng, p.c.h.cheng@sussex.ac.uk for informal enquiries.

The University is committed to equality and valuing diversity, and applications are particularly welcomed from women and black and minority ethnic candidates, who are under-represented in academic posts in Science, Technology, Engineering, Medicine and Mathematics (STEMM) at Sussex.

Please note that this position may be subject to ATAS clearance if you require visa sponsorship.

For full details and how to apply see our vacancies page

The University of Sussex values the diversity of its staff and students and we welcome applicants from all backgrounds.

2. The School / Division

Please find further information regarding the department and school at http://www.sussex.ac.uk/informatics/ and http://www.sussex.ac.uk/ei/.

3. Job Description

Job Description for the post of: Software Developer

Department: Informatics

Section/Unit/School: Engineering and Informatics

Location: Chichester I

Grade: 6

Responsible to: Professor Peter Cheng

Responsible for:

The primary responsibilities of the post are to develop and evaluate research-prototype software systems for the research project Cybersecurity visualization: collaborative graphical tools for security policies. The purpose of the systems is to enable effective communication and collaboration between organization managers, who devise access control policies, and IT specialists, who implement the policies digitally. The interface of the tools will be novel interactive information visualizations on which users will explore complex access control problems. Underpinning the graphical interface will be a database of simulated networks of users and computing resources. The postholder will implement and conduct evaluations of these components, including studies in which teams of users attempt to solve access control management tasks. In addition, to the software development and user testing, the post-
holder will have opportunities to contribute to the overall design of the interactive visualization and to the design of the user studies.

4. **Person Specification**

**PRINCIPAL ACCOUNTABILITIES**

1. To develop and evaluate software systems.

2. To observe and assist with individual and/or collaborative research activity and contribute to the production of research outputs for publications.

**KEY RESPONSIBILITIES**

1. **Research, Scholarship & Enterprise**

   1.1 With support from the Principal Investigator, develop research objectives and contribute to the planning of the research project

   1.2 Conduct research activity under supervision of the Principal Investigator, and in collaboration with others.

   1.3 Assist with the analysis and interpretation of research findings and contribute to discussions on conclusions and outcomes.

   1.4 Contribute to the writing of reports and other dissemination activities under the supervision of experienced researchers.

   1.5 Contribute to the preparation of research ethics and data management strategies, under guidance from the Principal Investigator to ensure compliance with ethical approval and data protection legislation.

   1.6 Present information on research progress and outcomes to relevant bodies under the supervision of the Principal Investigator.

   1.7 Plan own day-to-day research activity within the framework of the agreed programme.

   1.8 Learn about the publication process and contribute to research outputs for publication in monographs or recognised high-quality journals, or performance/exhibition, as appropriate.

   1.9 Continually update knowledge and understanding in field or specialism, and engage in professional development.
2. Teaching & Student Support

2.1 Assist in the supervision of student projects and provide guidance to those assisting in the research.

3. Contribution to School & University

2.1 Attend and contribute to relevant School and project meetings.

2.2 Undertake additional duties, as required by the Principal Investigator and/or Head of School.

4. Role-specific duties

4.1 Develop research-prototype software applications, which will encompass the design, implementation, documentation, testing, evaluation, and reporting.

4.2 Collaboration with members of the RepSys Lab and across the wider project teams.

This Job Description sets out current duties of the post that may vary from time to time without changing the general character of the post or level of responsibility entailed.

INDICATIVE PERFORMANCE CRITERIA

- Under the supervision of the Principal Investigator, conduct experiments/research to assist with project aims, with emphasis on training.

- Undertake research by preparing, setting up, conducting and recording the outcomes.

- Manage and analyse data, and prepare written reports and summaries.

- Maintain and store project files and equipment as per health and safety and data regulations.

- As part of career development, contribute to the preparation of journal articles based on the research with support from the Principal Investigator.
PERSON SPECIFICATION

ESSENTIAL CRITERIA

1. Normally educated to degree level, or other equivalent qualification, or relevant level of experience, as appropriate to the discipline (see role-specific criteria below).

2. Good presentation skills, with the ability to communicate effectively, both orally and in writing, with colleagues and external audiences.

3. Ability to work independently (under supervision by the Principal Investigator), and as part of a team.

4. Ability to exercise a degree of innovation and creative problem-solving.

5. Excellent organisational and administrative skills.

6. Ability to prioritise and meet deadlines.

7. Excellent IT skills.

8. Ability to follow guidance of team leaders.

ESSENTIAL ROLE-SPECIFIC CRITERIA

1. Significant experience in developing substantial interactive graphical web-based applications, with particular expertise in JavaScript, Java, databases, HTML5, PHP.


DESIRABLE CRITERIA

1. Knowledge of access control systems and practice.

2. Willingness to travel occasionally, with overnight stays, within the UK and internationally.