Research Assistant

ROLE DESCRIPTION

GRADE
Grade 4

LOCATION
Merchiston, Edinburgh

LINE MANAGER
Dr Amjad Ullah

ROLE SUMMARY

This post is a 30-month fixed-term Research-Assistant to work recently started EU project called: Swarmchestrate - Application-level Swarm-based Orchestration Across the Cloud-to-Things Continuum. Swarmchestrate project aims to develop a novel orchestration solution to facilitate the automated deployment and runtime management of Cloud-to-Edge-based applications. The development of the Swarmchestrate solution follows the philosophy of a distributed system while utilising a modern set of technologies such as swarm and distributed intelligence, optimisation, Blockchain, trust mechanisms such as Self-Sovereign Identities (SIS) and Distributed Identifiers (DID).

The overall goal is the development of an application-level orchestrator to support the automated deployment of microservices-based applications and their management in the Cloud-to-Edge ecosystem. The post is part of a joint Horizon Europe research project, supported by the UK Research and Innovation as part of the Horizon Europe scheme guarantee.

LINE MANAGEMENT RESPONSIBILITY FOR:

This role does not have any line management responsibilities currently.

MAIN DUTIES AND RESPONSIBILITIES

- Conduct research under the supervision of senior colleagues to design, implement and evaluate novel distributed orchestration solutions supporting cloud and edge-based applications.

- Preparation of peer-reviewed publications for quality conferences and journals and dissemination of research results at international and national conferences.

- Plan and manage research activity in collaboration with other project members and ensure research outputs are delivered following the project plan.

- Participate in external research networks or appropriate events to build new relationships, exchange ideas and disseminate findings, including public engagement activity.

- Regular liaison with the project partners through online channels and face-to-face meetings.

- Develop and/or contribute to proposals to secure future research funding.

- Undertake other research activities related to the core domain of the Swarmchestrate project.

- Role model the University's values & behaviours.

- Be responsible for ensuring that the information and records processed (received, created, used, stored, destroyed) on behalf of the University are managed in compliance with ALL applicable legislation, codes and policies e.g. Data Protection, Information Security and Records Management.

PERSON SPECIFICATION

	ESSENTIAL	DESIRABLE

EDUCATION / QUALIFICATIONS

- A PhD in a relevant research area such as distributed computing, cloud/edge systems, or relevant computational resource management area, or equivalent demonstrable research experience in a relevant area. ✔

SKILLS / EXPERIENCE

- Demonstratable experience in conducting research in the field of Cloud/edge computing and distributed systems. ✔

- Demonstratable experience and or/good knowledge of orchestration systems, auto-scaling, and automated resource and application management in the cloud/edge ecosystems. ✔

- A strong publication track-record demonstrating the ability to write up research work for high-profile publications. ✔

- Excellent skills in experimental design, experimental practice, and rigorous data analysis. ✔

- Excellent programming skills (preferably in Python, Java). ✔

- Experience of carrying out both independent and collaborative research. ✔

- Experience and knowledge of using cloud middlewares (e.g. OpenStack), Kubernetes, containers ✔

- Excellent Latex/Overleaf skills. ✔

- Excellent organisation, prioritisation and time management skills, with a flexible approach to working. ✔

- Excellent written and verbal communication skills to engage effectively with a wide-ranging audience using a range of media. ✔

- Proven ability to generate and implement new ideas. ✔

- Ability to work independently and as a part of a team to deliver research. ✔

- Excellent analytical skills. ✔