UNIVERSITY OF LEEDS

CANDIDATE BRIEF

Research Fellow in Green AutoML for 6G Edge-Fog-Cloud Continuum, Faculty of Engineering and Physical Sciences

Salary: Grade 7 (£37,099 – £44,263 p.a.)

Reference: EPSEE1121

Closing date: Sunday 07 April 2024

Fixed term for 12 months

We are open to discussing flexible working arrangements

Research Fellow in Green AutoML for 6G Edge-Fog-Cloud Continuum,
School of Electronic and Electrical Engineering.

The 6G National Research Programme is at the forefront of pioneering research and development in the field of 6G technologies. As part of the Communications Hub for Empowering Distributed Cloud Computing Applications and Research (CHEDDAR), we are focused on advancing the integration of UK expertise in communications and networking to maintain the country's leadership in 6G technologies. Our research is generously funded by the Engineering and Physical Sciences Research Council (EPSRC) and the Department of Science, Innovation, and Technologies (DSIT). By joining our team, you will have the opportunity to collaborate with leading experts nationwide and contribute to groundbreaking projects in the field.

We are seeking a Research Fellow to join our team and lead the research efforts in the domain of Green AutoML for 6G Edge-Fog-Cloud Continuum. As part of the CHEDDAR Hub, you will work alongside a diverse group of researchers dedicated to pushing the boundaries of 6G technology. Your primary responsibility will be to spearhead research initiatives aimed at developing green machine learning approaches, contributing to the advancement of sustainable practices for incorporating machine learning (ML) in telecommunication networks.

Holding a PhD (or have submitted your thesis before taking up the role) in Electronic and Electrical Engineering or a closely allied discipline, you will have a background in system level modelling and in programming with proficiency in at least one programming language (e.g., Python, Java, Rust, C/C++).

What does the role entail?

As a Research Fellow, your main duties will include:
- Developing AutoML models for 6G and OpenRAN ecosystem;
- Modeling Energy costs associated with ML integration within Edge-Fog-Cloud;
- Lead development of autonomous orchestration and splitting AI functionalities across continuum;
- Implementation of the proposed components on real world testbeds;
- Contribute towards the hub showcase and demo events;

- Generating and pursuing independent and original research ideas in the appropriate subject area;
- Developing research objectives and proposals and contributing to setting the direction of the research project and team including preparing proposals for funding in collaboration with colleagues;
- Evaluating methods and techniques used and results obtained by other researchers and to relate such evaluations appropriately to your own research;
- Preparing papers for publication in leading international journals and disseminating research results through other recognised forms of output;
- Making a significant contribution to the dissemination of research results by publication in leading peer-reviewed journals and by presentation at national and international meetings;
- Working independently and as part of a larger team of researchers, both internally and externally, to develop new research links and collaborations and engage in knowledge transfer activities where appropriate;
- Maintaining your own continuing professional development and acting as a mentor to less experienced colleagues as appropriate;
- Contributing to the training of both undergraduate and postgraduate students, including assisting with the supervision of projects in areas relevant to the project.

These duties provide a framework for the role and should not be regarded as a definitive list. Other reasonable duties may be required consistent with the grade of the post.

What will you bring to the role?

As a Research Fellow you will have:
- A PhD (or have submitted your thesis before taking up the role) in Electronic and Electrical Engineering or a closely allied discipline;
- A strong background in system level modelling and in programming with proficiency in at least one programming language (e.g. Python, Java, Rust, C/C++);
- Expertise in Machine Learning and Artificial Intelligence with special focus on generative machine learning;
- Expertise in deployment pipelines for ML including AWS Greengrass or similar and in local containerised deployment of ML;

- An understanding of Linux operating systems and shell scripting;
- Good time management and planning skills, with the ability to meet tight deadlines and manage competing demands effectively without close support;
- A developing track record of peer-reviewed publications in international journals;
- Excellent communication skills both written and verbal, and the ability to communicate your research at national and international conferences;
- A proven ability to work well both independently and in a team.

You may also have:
- Experience of pursuing external funding to support research;
- Experience of;
  - Contributing towards technology roadmaps;
  - Front-end APIs.

How to apply

You can apply for this role online; more guidance can be found on our How to Apply information page. Applications should be submitted by **23.59** (UK time) on the advertised closing date.

Contact information

To explore the post further or for any queries you may have, please contact:

Dr Syed Zaidi, Associate Professor
Tel: +44 (0)113 343 5241
Email: S.A.Zaidi@leeds.ac.uk

Dr Des McLernon, Reader
Email: D.C.Mclernon@leeds.ac.uk

Additional information

Faculty and School Information
Further information is available on the research and teaching activities of the [Faculty of Engineering & Physical Sciences](#), and the School of [Electronic and Electrical Engineering](#)

A diverse workforce
As an international research-intensive university, we welcome students and staff from all walks of life and from across the world. We foster an inclusive environment where all can flourish and prosper, and we are proud of our strong commitment to student education. Within the Faculty of Engineering and Physical Sciences we are dedicated to diversifying our community and we welcome the unique contributions that individuals can bring, and particularly encourage applications from, but not limited to Black, Asian and ethnically diverse people; people who identify as LGBT+; and people with disabilities. Candidates will always be selected based on merit and ability.

The Faculty of Engineering and Physical Sciences are proud to have been awarded the Athena SWAN [Silver](#) Award from the Equality Challenge Unit, the national body that promotes equality in the higher education sector. Our [equality and inclusion webpage](#) provides more information.

Working at Leeds
We are a campus-based community and regular interaction with campus is an expectation of all roles in line with academic and service needs and the requirements of the role. We are also open to discussing flexible working arrangements. To find out more about the benefits of working at the University and what it is like to live and work in the Leeds area visit our [Working at Leeds](#) information page.

Information for disabled candidates
Information for disabled candidates, impairments or health conditions, including requesting alternative formats, can be found on our [Accessibility](#) information page or by getting in touch with us at hr@leeds.ac.uk

Criminal record information

Rehabilitation of Offenders Act 1974

A criminal record check is not required for this position. However, all applicants will be required to declare if they have any 'unspent' criminal offences, including those pending.

Any offer of appointment will be in accordance with our Criminal Records policy. You can find out more about required checks and declarations in our [Criminal Records](#) information page.