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The Institute for Experiential AI

Northeastern University London

Northeastern University Global Network

Postdoctoral Research Associate in Responsible AI Systems Engineering

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Location	London
Term	Fixed term (2 years)
Salary	From £38,000 per annum (commensurate with experience)
Benefits	Generous benefits package including 25 days holiday allowance pro rata (excl. Bank holidays), group life assurance, group income protection, pension schemes and private healthcare
Start	Flexible start date; candidates will be interviewed on a rolling basis until the position is filled

About the Institute for Experiential AI

Do you want to be part of an exciting new Institute focused on the fusion of human and machine intelligence into working AI solutions?

The Institute for Experiential AI (EAI) is a pioneering research and innovation hub in AI – one that will shape the way humans and machines collaborate. Led by Dr Usama Fayyad, EAI is built around the challenges and opportunities made possible by human-machine collaboration. The institute provides a framework to design, implement, and scale AI-driven technologies in ways that make a true difference to society. Our ability to respond to the opportunities afforded by society will depend on training and building a workforce that is AI-capable.

At EAI we are committed to the highest of standards in all that we do. Working at the Institute offers unique opportunities and an innovative environment. This is the right place for you if you're curious, motivated by the future of technology and want to be part of a unique community that works on high-impact science, business, educational, and societal problems.

The role

The goal of the Responsible AI Systems Engineering (RAISE) project is to assist organisations in developing and deploying safe and reliable AI systems. The aim is to develop a set of software tools that automatically analyses the behaviour of these systems during both development (i.e., static and dynamic software testing) and deployment (i.e.,

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online monitoring and exception handling). The main hypothesis of RAISE is that if the way we develop software for AI systems is changing, so must the way we test harness it.

The Institute for Experiential AI and Northeastern University London wishes to appoint a post-doctoral research associate to conduct world-leading research on the RAISE project. The areas of research include, but are not limited to, property-based testing, program analysis, error analysis, transfer learning and fine tuning, system design for humans-in-control, and anomaly detection. The successful candidate is expected to submit publications to top-tier conferences and journals in machine learning, software engineering and systems research.

We expect postdoctoral researchers to establish and advocate for best practices in scientific reproducibility of all results, and to promote the ethical use of data and algorithms.

This role is a research-only position. However, there is the provision to engage in teaching if the successful candidate should wish.

Person Specification

Qualifications

- PhD in computer science, AI, or in related scientific disciplines (essential)

Key Criteria

- Strong research background in systems engineering and machine learning, evident by relevant conference presentations and publications (essential)

- Strong analytical, computational, and quantitative abilities (essential)

- Strong interpersonal, organisational, and communication skills, and the willingness to work with multiple researchers, technical staff, post-doctoral and doctoral students in an interdisciplinary environment (essential)

- Ability to exercise judgement and discretion, and to prioritise and manage multiple tasks (essential)

- Excellent written and oral presentation skills for reaching audiences both in and out of one's own field (essential)

- Experience in proposal preparations for external research funding (desirable)

Job Duties

Successful applicants will be expected to carry out independent research, analyse results, prepare reports and publications, and contribute to research proposals. They will help mentor both master's and doctoral students.

Job duties will include the following roles, with distribution of time, dependent on expertise and seniority:

- Assist in initiating, executing, and completing research and analysis (50-60%)

- Prepare and write research papers, presentations, grant proposals, etc. (20-25%)

- Data and project management (15-20%)

- Collaborate and provide mentorship for graduate students (5-10%)

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About Northeastern University – London (NUL)

Formerly known as New College of the Humanities, and founded in 2012, NUL has established itself as a prestigious higher education institution based in the heart of London. After becoming part of Northeastern University's global network in early 2019, NUL has undergone a period of rapid growth, having been granted taught degree awarding powers in February 2020 and moving to new state-of-the-art premises, next to Tower Bridge, in 2021. NUL continues to grow, taking in more students every year, further expanding its courses, networks, and accelerating opportunities for research.

About the Northeastern University Global Network

Founded in 1898, Northeastern is a global research university and the recognized leader in experience-driven lifelong learning. Our world-renowned approach empowers our students, faculty, alumni, and partners to create impact far beyond the confines of discipline, degree, and campus.

Our locations – in Boston; Charlotte, North Carolina; London; Portland, Maine; San Francisco; Seattle; Silicon Valley; Toronto; Vancouver; and the Massachusetts communities of Burlington and Nahant – are nodes in our growing global university system. Through this network we expand opportunities for flexible, student-centred learning and collaborative, solutions-focused research.

Northeastern's comprehensive array of undergraduate and graduate programs – in a variety of on-campus and online formats – lead to degrees, through to doctorate, in nine colleges and schools. Among these, we offer more than 195 multi-discipline majors and degrees designed to prepare students for purposeful lives and careers.

Northeastern University is an equal opportunity employer, seeking to recruit and support a broadly diverse community of faculty and staff. Northeastern values and celebrates diversity in all its forms and strives to foster an inclusive culture built on respect that affirms inter-group relations and builds cohesion.

Enquiries

Informal enquiries may be made to Alexandros Koliousis (a.koliousis@northeastern.edu). To be considered for the position, applications must be made in accordance with the process specified.

Application Process

Applications should be made via **this link** by 20:00 on 17th April 2023. Please reference your application "**AIPD001**".

Please ensure that your application includes a CV and cover letter. Applicants should address the selection criteria and indicate how their background and expertise are aligned with those at EAI and NUL.

Names and contact information of references should be provided through the cover letter. References will only be sought for finalists.

Participation in the equal opportunities section is encouraged, but voluntary. Applications are welcome from all sections of the community and will be judged on merit alone. We welcome applications from underrepresented groups. Candidates must be able to demonstrate their eligibility to work in the UK in accordance with the Immigration, Asylum and Nationality Act

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2006. We may be able to offer sponsorship for this role. Please detail your requirements in your cover letter.

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