Academic Role Profile

Job Title:	Lecturer/Senior Lecturer/Reader in AI and Health Economics

Surrey Institute for People-Centred AI (PAI) appointment

Faculty School/Department(s) for collaboration:

School of Health and Medical Sciences (FHMS), School of Economics (FASS), Department of Computer Science (FEPS), Department of Mathematics (FEPS)

Job Summary/Purpose

We are excited to be recruiting to the new post of Lecturer/Senior Lecturer/Reader in AI and Health Economics which will be part of our new PAI Institute. The PAI Institute mission is to bring together world-leading expertise in fundamental AI theory and practice with cross-University domain expertise to realise and shape AI impact for public good. The PAI Institute will establish a beacon of national leadership for people-centred AI research and training in partnership with industry, UKRI and government on a national and international basis. If you join us, you will collaborate with colleagues in delivering world-leading research and teaching capability to students and businesses, focusing on the interactions between human and AI system by utilising a true cross-disciplinary approach to research in AI, to solve real-world challenges and problems. AI holds great promise for transforming almost every aspect of healthcare and health research, ranging from monitoring and diagnosis to health care delivery. AI has the potential to personalise health and social care for the individual in the community and at home. Realisation of the potential of AI in healthcare requires strong linkage between AI expertise, existing health (domain) expertise, key stakeholders (NHS) and the public, and invites innovate approaches to evaluation including cost-effectiveness through clinical trials and other studies. To this end, Surrey are excited to be formally establishing an integrated AI-Health ecosystem with key stakeholders to lead the translation of AI enabled technologies into healthcare practice for individual patient benefit. We are therefore welcoming candidates with relevant experience in health economic and cost-effectiveness evaluation with a strong focus and understanding of AI, machine learning, audio-visual machine perception and/or natural language processing.

The appointee will lead research, collaboration and lead/support grant applications in AI-focused projects aligned with the PAI Institute research strategy in People-centred AI. The post holder will establish and lead a portfolio of research, in collaboration with domain experts across the University establishing cost-effectiveness and supporting the implementation of people-centred AI solutions. In particular the appointee will collaborate with the Surrey Clinical Trials Unit, and work closely with statisticians, health economists and research advisers in the Department of Clinical and Experimental Medicine to achieve their goals. Surrey CTU and Surrey Health Economics Centre support the Surrey Hub of NIHR Research Design Service South-East, providing research advice and leading trials/evaluations in applied health and social care including in digital health and AI-focused interventions. The appointee will also teach and assess on undergraduate and postgraduate programmes in their specialist areas as well as contributing more generally to the School's educational programmes, including supervision. The post holder will also contribute to leading and delivering teaching in cross-University AI programmes at postgraduate level.

Person Specification AI

- Research leadership in AI, machine learning, data science, computer vision, audio-visual machine perception and/or natural language processing.
- A strong research and publication record.
- Experience in developing research proposals and securing research income together with supervising postgraduate research students and/or early career researchers.
- Demonstrated track-record of successful multi-disciplinary research leadership and collaboration.
- Familiarity with development, delivery and assessment of programme units.
- Experience of working with industry and other professional bodies.
- Excellent presentation, communication and interpersonal skills.
- Consistently collegial and supportive approach to students and colleagues.
- Experience and potential for independent and collaborative research leadership.

Person Specification AI-Health Economics

- Experience with the analysis of large administrative datasets, including the treatment of personal sensitive/confidential data.
- Experience in the analysis of health data, including person-specific and organisation-specific quality and process indicators.
- Experience in statistical and econometrics modelling, including but not limited to cross-sectional, longitudinal and multilevel regression models.
- Familiarity to engage with institutional partners, project stakeholders, data providers and policy-makers.
- Experience in or knowledge of health technology evaluation analysis (e.g. evaluation of cost-effectiveness, clinical trials, survival analysis).
- A solid understanding of the functioning of healthcare markets, whether private or publicly funded.
- Prior knowledge of the institutional organisation of the English NHS and/or other healthcare systems.
- A track record of research projects and publications, including at least some in Health Economics.

Person Specification

This section describes the sum total of knowledge, experience & competence required by the post holder that is necessary for standard acceptable performance in carrying out this role. This is in addition to the criteria contained within the accompanying generic Job Purpose.

	Essential/ Desirable
A higher research degree (PhD) or equivalent experience in health economics or a related discipline	E
Research leadership in health economic and cost-effectiveness evaluation with a strong focus and understanding of AI, machine learning, data science, computer vision, audio-visual machine perception and/or natural language processing	E
Strong methodological interest in developing economic modelling techniques and adaptive evaluation strategies appropriate to the implementation of dynamic systems	E
Evidence of external research grant income generation in this field relevant to career stage.	E
Strong publication record relevant to career stage with a track record of publishing high quality outputs.	E
Experience and potential for independent and collaborative research leadership including working with industry and other professional bodies	E

Demonstrated ability to successfully supervise postgraduate and doctoral students	E
Evidence of high-quality teaching	E
Evidence of scholarly contributions to conferences, professional meetings and societies at an international level, and evidence of achievements in other external activities at an international level	E

Key Responsibilities

This document is not designed to be a list of all tasks undertaken but an outline record of any faculty/post specific responsibilities (5 to 8 maximum). This should be read in conjunction with those contained within the accompanying generic Job Purpose.

Main Responsibilities/Activities
- Contribute as a Principal Investigator of the AI Institute to establishing and leading pan-University research in People-Centred AI for the benefit of people and society.
- Develop and lead a research portfolio in the area of AI and health economics.
- Contribute to and lead teaching within relevant specialist area at undergraduate and postgraduate level.
- Lead a programme of research by managing associated financial/physical resources and recruiting/supervising/guiding/mentoring the work of staff and postgraduate students in own specialist subject area.
- Sustain a strong track-record of publication of high-quality research findings in appropriate journals and international conferences.
- Maintain a good level of research funding; contribute to planning and coordinating large multi-disciplinary or multi-Faculty bids involving collaborative groups.
- Enhance reputation in own subject area by engaging in external activities at national level such as contributions to professional networks, meetings, conferences, societies, professional and/or government bodies, editing/refereeing journals and papers.
- Perform administrative duties throughout the Institute/Department/Schools as are recognised by the University in roles commensurate with the remit of an academic (ie Director of Research, Director of Studies, Programme Director and Examinations Officer) and which contribute to the general life and work of the University.

N.B. The above list is not exhaustive.