UNIVERSITY OF
SURREY

Research Role Profile	

Job Title:	Research Fellow in Machine Learning

Responsible to:	Head of research group, or principal investigator

Responsible for:	Not applicable

Job Summary and Purpose
To deliver research in accordance with the specified research project.

Main Responsibilities/Activities
To contribute to the development of the research of the Faculty, by planning and carrying out research activity within a specified area, often in collaboration with colleagues. To take a significant role in planning, co-ordinating and implementing research programmes and, where appropriate, commercial and consultancy activities. To take lead responsibility for a small research project or identified parts of a large project. This may include planning fieldwork, data analysis and evaluation and laboratory experimentation. To make decisions about research programmes and methodologies, often in collaboration with colleagues, and to resolve the problems of meeting research objectives and deadlines. To develop new concepts and ideas to extend intellectual understanding. Assess, interpret and evaluate the outcomes of research, and develop ideas for the application of research outcomes. To take a role in the regular publication of results in appropriate journals, in giving presentations at national and/or international conferences, and in other outputs as required and/or appropriate. Continually to update knowledge and develop skills. To extend, transform and apply knowledge acquired from scholarship to research and appropriate external activities. To carry out management and administrative tasks associated with specified research funding, including managing and developing staff within their projects; risk assessment of project activities; organisation of project meetings and documentation; management of resources, preparation of annual reports, and management or monitoring of research budgets. To oversee and implement procedures required to ensure accurate and timely formal reporting and financial control. To undertake liaison with external organisations including equipment manufacturers, steering committees, associated academic facilities and commercial users.

Research Role Profile

Person Specification
The post holder must have:
Normally a doctoral degree in a relevant discipline, together with appropriate experience of working in a similar area of work.

The post holder will need to demonstrate a high level of competence and independent standing in research by being nationally recognised within their area of discipline, publishing regularly in recognised appropriate journals and attracting research funding for their own work or for other staff within the research group.

Relationships and Contacts
The post holder may have a key responsibility to the principal investigator, with prime responsibility for reporting and liaison with external funding bodies or sponsors. The post holder will also supervise the activities of PhD students and technician staff within the particular research group

Special Requirements
To be available to participate in fieldwork as required by the specified research project.

All staff are expected to:

- Positively support equality of opportunity and equity of treatment to colleagues and students in accordance with the University of Surrey Equal Opportunities policy.

- Help maintain a safe working environment by:

  - Attending training in Health and Safety requirements as necessary, both on appointment and as changes in duties and techniques demand

  - Following local codes of safe working practices and the University of Surrey Health and Safety Policy

- Undertake such other duties within the scope of the post as may be requested by your Manager.

Research Role Profile

Addendum

Job Title:	Research Fellow in Machine Learning

Job Summary and Purpose:

This information sheet should be read in conjunction with the accompanying generic Research RA1A Role Profile and will be used for shortlisting processes. More specifically the post holder will be expected to:

The postholder will join the Machine Learning for Healthcare Research team at the Centre for Vision, Speech and Signal Processing (CVSSP). The post is part of the healthy home programme within the Imperial-Surrey Care Research and Technology Centre at the UK Dementia Research Institute (UK DRI) (https://www.imperial.ac.uk/uk-dri-care-research-technology/).

Main Responsibilities/Activities

To undertake a range of research activities within a specified research area, assuming responsibility for specific areas of projects and making use of new research techniques and methods, in consultation with the research award holder or supervisor. This may include fieldwork, prototype development, critical evaluation and interpretation, data analysis and evaluation of healthcare solutions.

The responsibilities will include:

- Programming and design of new solutions for healthcare applications.

- Design of data collection and processing methods for non-invasive sensors and patient monitoring systems.

- Development of novel AI and machine learning solutions for healthcare applications

- Publication in highly ranked journals and conferences

- Contributions to projects and effective collaboration with the co-researchers and the project partners.

- Documentation of project results.

The postholder will be responsible for research into machine learning, time-series data analysis and probabilistic models, with a particular focus on adaptive learning as well as developing solutions for processing Internet of Things and sensory data.

The postholder will also be involved in system integration, verification and validation and will

work with the software development and clinical teams within the centre. The role will suit a highly motivated candidate who is interested in addressing real-world challenges and creating end-to-end solutions.

Person Specification

The post holder must have:

• PhD/DPhil (or be near completion), as well as holding a first degree in engineering, physics, computer science, mathematics, statistics or similar.

• Experience in machine learning, time-series data analysis and probabilistic models.

• Programming experience in Python, MATLAB or R.

Preferred qualifications

• Experience in software development and time-series data analysis.

• Interest and ability to learn other coding languages as needed.

The post holder will have authority over some aspects of project work and must be capable of providing academic judgement, offering original and creative thoughts and be able to interpret and analyse results.

Relationships and Contacts

Direct responsibility to the principal investigator or academic supervisor; The post holder may be asked to serve on a relevant Faculty committee. There may be additional reporting and liaison responsibilities to external funding bodies or sponsors. The post holder may work on original research tasks with colleagues in other institutions.