



Job Description

Job Title:	Postdoctoral Research Associate in Applied Machine Learning for High-Stakes Regulated Domains
Department:	Computer Science
Job type:	Professional Services, Full Time, Fixed Term
Grade:	RHUL 7
Accountable to:	Principal Investigator
Accountable for:	N/A
Purpose of the Post	
To be an active member of the department in delivering a research project on applied machine learning for high-stakes regulated domains, including areas such as law, finance, and regulatory decision-making. The role holder will contribute to the development of reliable, interpretable and uncertainty-aware machine learning methods that can support robust decision-making in settings where errors may have significant legal, financial, or social consequences. The role holder will be expected to produce independent, original contributions to the subject area.	
Key Tasks	
Research	
- Design, develop and evaluate novel machine learning methods for high-stakes regulated domains, with particular focus on reliability, uncertainty quantification, interpretability and robustness under changing legal, financial or policy conditions. - Apply machine learning, statistical modelling and data-driven analysis to relevant domain data, including structured datasets, panel data, text data, regulatory documents, legal materials, financial information and policy reports. - Design, analyse and refine appropriate experiments to validate research hypotheses and assess the performance and reliability. - Identify new avenues and directions for future research at the intersection of applied machine learning, trustworthy AI, law, finance and regulation.	
Writing, publication and presentation for academic audiences	
To write up research work for publication in disciplinary peer-reviewed academic journals and contribute to their dissemination at national/international conferences.	
Building external stakeholder relationships and networks	
- To coordinate relationships and events with research partners and external stakeholders to develop and deliver knowledge exchange towards impact. - Present regular progress reports on research to members of the research group or to external audiences to disseminate and publicise research findings.	

Impact and dissemination with non-academic audiences

- To plan and generate impact-focused material to reach and influence non-academic audiences.
- Liaise on a regular basis with colleagues and students and build contacts and participate in internal networks for the exchange of information and to form relationships for future collaboration. To contribute to Royal Holloway's public engagement programme by establishing links with local community groups, industries etc.
- Join external networks to share information and ideas.

Administrative support

- To provide administrative support to the Principal Investigator and research team, as required, to deliver the project's core aims and objectives.
- To carry out routine administrative tasks associated with the research project to ensure that projects are completed on time and within budget. These might include organisation of project meetings and documentation, financial control, risk assessment of research activities.

Other Duties

The duties listed are not exhaustive and may be varied from time to time as dictated by the changing needs of the University. The post holder will be expected to undertake other duties as appropriate and as requested by their manager.

The post holder may be required to work at any of the locations at which the business of Royal Holloway is conducted.

Our Values

Advancing equity and inclusion is central to our identity as a University of Social Purpose, guided by our values of being Respectful, Innovative, Open, and Daring. We strive to build a fair and inclusive environment for all colleagues and students, where we challenge ourselves and others with integrity, and approach difference with understanding and kindness. Every member of our community is expected to treat others with dignity, work collaboratively across a wide range of backgrounds and perspectives, and contribute to a place where everyone can participate fully and feel valued.

Person Specification

Details on the qualifications, experience, skills, knowledge and abilities that are needed to fulfil this role are set out below.

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	Essential	Desirable
Knowledge, Education, Qualifications and Training		
PhD in relevant subject area (or near completion of - it is expected that the appointee will have their PhD awarded within 4 months of the start date)	X	
Proven knowledge of research techniques and methodologies relevant to Machine Learning	X	
Demonstrable comprehensive knowledge in the subject area	X	
Knowledge of techniques for Machine Learning in high-stakes domains.		X
Skills and Abilities		
Excellent communication skills	X	
Ability to present complex information effectively to a range of audiences	X	
Machine Learning programming	X	
Experience		
Evidence of a good quality publication record in publications	X	
Evidence of contributing to research bids		X
Practical experience of applying specialist skills and techniques required for the role	X	