

THE UNIVERSITY OF NOTTINGHAM
Recruitment Role Profile

Job Title:	Research Associate/Fellow
School/Department:	School of Computer Science and the Rights Lab Beacon of Excellence
Job Family and Level:	Research & Teaching Level 4 Training Grade/Level 4
Contract Status:	Fixed-term initially until 31 July 2018 with the potential for continuation
Hours of Work:	Full-time (36.25 hours per week)
Location:	School of Computer Science, Jubilee Campus, Nottingham
Reporting to:	Rights Lab Machine Learning Lead

Purpose of the Role:

This role is part of the University of Nottingham's Rights Lab, a Beacon of Excellence that is delivering research to help end contemporary slavery. Working as part of a multidisciplinary team, the Research Associate (RA) will support research on the Slavery Observatory project of the Rights Lab under the supervision of the Machine Learning lead, Professor Thomas Gärtner, and the project leads, Professor Stuart Marsh and Dr Doreen Boyd.

This part of the Slavery Observatory aims to use existing and develop new machine learning and/or data mining techniques to observe activities associated with slavery. These will include illegal fish farming, logging, brick making, mining and so on. Its objectives are:

- To compile, synthesise and integrate spatial data to detect and eventually prevent slavery.
- To develop automated methods dealing with as much data as possible (and available) at as low as possible cost, with known levels of uncertainty.

The role holder will support and conduct research in relevant areas of machine learning and/or data mining and apply the algorithms to various kinds of geospatial data such as satellite images and mobile phone records. In particular, relevant techniques include (but are not restricted to) active learning and search, multi-relational mining and learning, one-class learning, outlier detection, multi-view learning, and rare pattern mining.

Main Responsibilities

1	Research activities (70%): Conduct research related to the project goals in collaboration with the project investigators and external collaborators.
2	Publication and Dissemination (15%): Writing of research reports and papers in order to disseminate research results and develop a track record of published research findings in internationally respected peer reviewed conferences and journals. Dissemination of results includes presentations at local, national and international meetings, conferences and seminars.

3	Project management (10%): Defining research objectives in collaboration with and under guidance of senior colleagues, managing resources in order to achieve research outputs, organising and participating in meetings with other research staff to clarify objectives, collaborating with other project team members and other partners within the Rights Lab and Computer Science. Development of work plans/timetables with research and support staff, communication of progress to investigators.
4	Proposals (5%): To contribute to new research projects in support of the Rights Lab. To develop new solutions to related problems, in order to further knowledge in the area of research.

Knowledge, Skills, Qualifications & Experience

	Essential	Desirable
Qualifications/ Education	<ul style="list-style-type: none"> • PhD (or close to completion) or equivalent in relevant subject area or the equivalent in professional qualifications and experience • Academic publications in relevant conferences and journals 	<ul style="list-style-type: none"> • Research experience in directly related areas of machine learning and/or data mining
Skills/Training	<ul style="list-style-type: none"> • Outstanding ability to conduct excellent research • Excellent written, verbal and presentation skills • Proven ability to work as part of a team and support colleagues • Ability to plan and conduct high quality research • Organisation & time management skills • Interpersonal & communication skills 	<ul style="list-style-type: none"> • An interest in data science for social good and human rights
Experience	<ul style="list-style-type: none"> • Experience working within a multi-disciplinary research team • Record of research publications in relevant areas (appropriate to career stage) 	<ul style="list-style-type: none"> • Previous success in gaining support for externally funded research projects • Experience of developing new approaches, models, techniques or methods in research area • Familiarity with the topic of modern slavery