



HR EXCELLENCE IN RESEARCH

Edge Hill
University

It is important to note that this job description is a guide to the work you will initially be required to undertake. It may be changed from time to time to meet changing circumstances. It does not form part of your contract of employment.

Job description for the post of:

**Postdoctoral Research Associate in Text Mining
EHR0067-0618**

Reporting to: Principal Investigator of the Research Project

Accountable to: Head of Department

The Post

Applications are invited for a postdoctoral research associate in Text Mining at the Department of Computer Science, Edge Hill University, Ormskirk, UK.

The successful applicant will work on a 3-year H2020 project focusing on Open Source Software assessment. The objective is to design and develop innovative text mining methods for processing diverse data sources (e.g., social media posts, forum posts, bug tracker reports and website content) in order to inform decision makers about the quality of Open Source software projects.

Candidates should have a PhD in Computer Science with a focus in Natural Language Processing/Computational Linguistics/Text Mining; solid programming skills, working experience in software development (Java/C++/Python or similar languages, SQL/NoSQL databases etc); (ideally) good knowledge of statistical and/or machine learning methods for NLP and a strong publication record in relevant conferences/journals.

Duties and responsibilities

The duties and responsibilities of this post are as follows. The post holder will be expected to carry out the following as and when required.

Specific duties and responsibilities

The post holder will be expected to:

- a) Engage positively in research activity in the broad area of Natural Language Processing/Text Mining under the direction of the Principal Investigator of the Research Project.

- b) Conduct high quality research in different areas of Natural Language Processing/Text Mining, including opinion mining, topic modelling, document clustering and text classification.
- c) Develop natural language analysis tools to extract quality metrics related to the communication channels, and bug tracking systems of OSS projects by using Natural Language Processing and text mining techniques;
- d) Improve upon existing Natural Language Processing algorithms using deep learning representation techniques (word/document embeddings)
- e) Develop novel, scalable text mining methods to process heterogenous data sources.
- f) Publish research outputs in leading peer-reviewed journals with an international audience.
- g) Effectively disseminate research findings at internal and, where appropriate, external scientific meetings and conferences.
- h) Ensure that their skills and technical competence are kept sufficiently up to date to enable them to utilise specialist equipment and software used in the research projects.
- i) Participate in project meetings/ (including international travel).
- j) Engage with relevant academic and professional networks through active membership of societies, associations etc.
- k) Contribute to the delivery of lectures and practical classes at undergraduate and taught postgraduate level.
- l) Assist in the supervision of third year undergraduate dissertation students and taught Masters within the area of research expertise.
- m) Assist in the development of the research skills of postgraduate students, for example as part of a postgraduate supervisory team, and through the delivery of practical workshops.
- n) Contribute to relevant departmental and research group meetings.
- o) Undertake additional duties, as required by the Principal Investigator or Head of Department.

Corporate Responsibilities

The post holder will:

- a) Contribute to the fulfillment of Edge Hill University's Mission Statement and Strategic Plan by implementing agreed Edge Hill policy.
- b) Promote and implement the University's equality and diversity policies.
- c) Promote and implement the University's equal opportunities policies.

In addition to the above all Edge Hill University staff are required to:

- a) Adhere to all Edge Hill's policies and procedures, including Equality and Diversity and Health and Safety
- b) Respect confidentiality: all confidential information should be kept in confidence and not released to unauthorised persons
- c) Undertake appropriate training and development as required
- d) Participate in Edge Hill's Performance Review and Development Scheme
- e) Adhere to Edge Hill University's environmental policy and guidelines and undertake tasks in a sustainable manner
- f) Demonstrate excellent Customer Care in dealing with all customers

Salary: Grade 8, points 31-35

Hours: Full time

Candidates should note that they will be shortlisted based on information provided on the application form with regard to the applicant's ability to meet the criteria outlined in the Person Specification form attached.



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CRITERIA

Applicants should be able to provide evidence of their ability to meet the following criteria.

| | | Essential | Desirable | *Method of assessment (I/A/T/P) |
|---------------------------------|--|-----------|-----------|---------------------------------|
| Qualifications | | | | |
| 1 | PhD in Computer Science | * | | A |
| Experience and Knowledge | | | | |
| 2 | Detailed understanding and knowledge of Natural Language Processing/Text Mining | * | | A/I |
| 3 | Previous experience of conducting high quality research involving Natural Language Processing/Text Mining | * | | A/I |
| 4 | Experience of working in the Higher Education sector | | * | A/I |
| 5 | Experience of working in multi-disciplinary research | | * | A/I |
| 6 | Knowledge of the processes involved in preparing and submitting research proposals | | * | A/I |
| Abilities/Skills | | | | |
| 7 | Able to communicate new and complex information effectively, both verbally and in writing, engaging the interest and enthusiasm of the target audience | * | | A/I |
| 8 | Able to present research results at department meetings and conferences | * | | A/I/P |
| 9 | Able to write up research outcomes for publication in leading peer-reviewed journals | * | | A/I |
| 10 | Able to work on own initiative, organising and prioritising work effectively under pressure to meet deadlines | * | | A/I |
| 11 | A self-starter, able to work independently and without supervision as well as part of a team | * | | A/I |
| 12 | Ability to operate flexibly and reliably | * | | A/I |
| 13 | Able to develop and maintain effective working relationships at all levels | * | | A/I |
| 14 | Able to maintain total confidentiality and to work within ethical guidelines | * | | A/I |
| Other | | | | |
| 15 | Willingness to adapt to change | * | | I |

***Method of Assessment (I-Interview, A-Application, T-Test, P-Presentation)** Please note that applications will be assessed against the Person Specification using this criteria.