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 Researcher in Natural Language Processing and Text Mining EHR0047-1216

Fixed term until 31st December 2019

Reporting to: Principal Investigator of the Research Project

Accountable to: Head of Department

The Post

Applications are invited for a postdoctoral researcher in Natural Language Processing and Text Mining at the Department of Computer Science, Edge Hill University, Ormskirk, UK.

The successful applicant will work on a 3-year Horizon 2020 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 the broad area of Computer Science with a focus in Natural Language Processing/Text Mining. The candidate must have strong programming skills and working experience in software development (Java/C++/Python or similar languages, SQL/NoSQL databases etc). A good knowledge of statistical and/or machine learning methods for NLP and a strong publication record in relevant conferences/journals are highly desirable.

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 (NLP/TM) and specifically in opinion mining, topic modelling, document clustering and text classification under the direction of the principal investigator of the research project.

b)   Conduct high quality research in different areas of NLP/TM using statistical and/or machine learning methods and toolkits such as OpenNLP, Weka, Spark, Mahout, LibSVM and LibLinear.

c)   Use Java/C++/Python or similar languages, SQL/NoSQL databases etc. to develop natural language analysis tools to extract quality metrics related to the evaluation of OSS projects by using NLP/TM techniques.

d)   Improve upon existing NLP algorithms using deep learning representation techniques (word/document embeddings).

e)   Develop novel, scalable TM methods to process heterogenous data sources.

f)   Effectively collaborate with the project consortium and local team members.

g)   Effectively communicate research findings at internal and, where appropriate, external project meetings, scientific meetings and conferences.

h)   Publish research outputs in leading peer-reviewed journals in the area of Data Analytics.

i)   Ensure that her/his skills and technical competence in relevance to scheduling jobs on a grid/cloud, writing Linux shell scripts and programming in Java are kept sufficiently up to date to enable her/him to utilise specialist equipment and software used in the research projects.

j)   Undertake activity related to the development of effective applications for research funding in the specific area of data analytics in collaboration with the project team.

k)   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.

l)   Undertake additional duties, as required by the principal investigator or Head of Department.

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
£32,958 - £37,075 per annum

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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Fixed term until 31st December 2019

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 or related area	*		A
Experience and Knowledge				
2	Detailed theoretical and practical understanding and knowledge of natural language processing/text mining	*		A/I/P
3	Strong programming skills and working experience in software development	*		A/I/P
4	Previous experience of conducting high quality research involving natural language processing/text mining	*		A/I/P
5	Experience of working in the Higher Education sector		*	A/I
6	Experience of working in multi-disciplinary research		*	A/I
7	Knowledge of the processes involved in preparing and submitting research proposals		*	A/I
Abilities/Skills				
8	Able to communicate new and complex information effectively, both verbally and in writing, engaging the interest and enthusiasm of the target audience	*		A/I
9	Able to present research findings and participate at internal and external project meetings, scientific meetings and conferences	*		A/I/P
10	Able to write up research outcomes for publication in leading peer-reviewed journals	*		A/I
11	Able to work on own initiative, organising and prioritising work effectively under pressure to meet deadlines	*		A/I
12	A self-starter, able to work independently and without supervision as well as part of a team	*		A/I
13	Ability to operate flexibly and reliably	*		A/I
14	Able to develop and maintain effective working relationships at all levels	*		A/I

		Essential	Desirable	*Method of assessment (I/A/T/P)
15	Able to maintain total confidentiality and to work within ethical guidelines	*		A/I
Other				
16	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.