Candidate Information

Position:	Research Fellow - Deep Learning and Natural Language Processing
School/Department:	School of Electronics, Electrical Engineering and Computer Science
Reference:	23/110694
Closing Date:	Monday 20 March 2023
Salary:	£35,333 per annum
Anticipated Interview Date:	Monday 17 April 2023 or Thursday 20 April 2023
Duration:	3 years or until 31 March 2026, whichever is sooner

JOB PURPOSE:

To be a highly productive, ambitious and collaborative member of the Advanced Research and Engineering Centre within Northern Ireland. The Centre brings together expertise from PwC, University of Ulster and Queen's University Belfast.

The Research Fellow will join this vibrant network of collaborators to assist in the planning and delivery of the research activity specifically to develop experiments and prototypes at the frontier of artificial intelligence, human computer interaction and visualisation research. They will lead the research and development in deep learning based natural language processing (NLP) technologies aligning to the specification developed in conjunction with PwC and will then experimentally assess the benefits of using such advanced technologies in enhancing the understanding of complicated data and processes.

MAJOR DUTIES:

1. Undertake research under supervision within the specific research project and, as a member of the collaborative research team, contribute to develop FinTech Compliance Management Tool (CMT) and apply knowledge of relevant domains along with expert coding skills to platform and framework development projects.
2. Develop/apply highly scalable algorithms for FinTech CMT based on state-of-the-art AI methodologies and design suitable user studies.
3. Carry out analyses, experiments, critical evaluation and interpretation of experimental data and the literature using methodologies and techniques appropriate to the area of research across a range of platforms and facilities of the wider PwC partnership.
4. Produce high quality research outputs consistent with project aims and commensurate with career stage. This will include collaborating and co-authoring with PI and project team (as appropriate) on outputs.
5. In consultation with the project team, promote research milestones and outputs at national and international conferences and through social media (where applicable).
6. Carry out occasional educational supervision, demonstrating or lecturing duties within the post holder's area of expertise and under the direct guidance of a member of academic staff.
7. Undertake supplementary duties relevant to the success of the project including administrative duties, presentation of regular progress reports and additional training and development activities as required.

ESSENTIAL CRITERIA:

1. 2.1 Honours Degree (or equivalent) in Computer Science, Applied Mathematics, Electronics, Electrical Engineering, or a closely related discipline.
2. Obtained or be about to obtain a PhD in Computer Science, Applied Mathematics, Electronics, or Electrical Engineering.
3. Relevant experience to include:
   - 3+ years experience in deep learning and NLP research and development
   - working effectively as part of a research team in the development and promotion of a research topic.
4. Demonstrable knowledge of common deep learning models for NLP.
5. Demonstrable knowledge and experience of Python and (Java or C# or C++) programming languages.
6. Strong publication record, commensurate with stage of career.

7. Ability to contribute to broader management and administrative processes.
8. Contribute to the School’s outreach programme by links with industry, community groups etc.
9. Practical problem-solving skills, independence of thought and initiative.
10. Ability to assess and organise resources.
11. Ability to communicate complex information in English effectively in oral and written format to technical and non-technical audiences.
12. Ability to build relationships with a wide range of people and roles at different levels of seniority and to influence decision making.
13. Ability to manage self and prioritise workload.
14. A pro-active approach to work and team development.
15. Commitment to continuous professional development.
16. Ability to meet the mobility requirements of the post including the travel to project partners as required by the role.

DESIRABLE CRITERIA:

1. Experience in regulatory compliance.
2. Experience in obligation extraction from regulation documents.
3. Strong background in software application development.
4. Experience of the application of AI algorithms and software in multidisciplinary activities.