Post-Doctoral Research Associate, Opening Up Minds EPSRC project

Fixed Term – 24 months
Full Time
Grade AC2
Walton Hall, Milton Keynes

The Role

We are looking for a Research Associate to work on the “Opening Up Minds: Engaging Dialogue Generated from Argument Maps” project. This is a 2-year EPSRC-funded project that will start in January 2021. It brings together researchers from the Open University (lead organisation), the University of Cambridge, the University of Sheffield and Toshiba Research Europe.

The successful candidate will be based in the NLP & AI group of the Open University’s School of Computing and Communications and supervised by Dr. Paul Piwek. The overall aim of the project is to develop a dialogue system interface to existing databases of arguments surrounding controversial topics such as ‘Should the United Kingdom remain a member of the European Union?’ and ‘Should all humans be vegan?’. The work package led by the Open University will focus on creating a parallel annotated corpus of multi-party dialogues and argument maps, and development of language generation templates and hybrid psychology-based dialogue strategies.

You will be part of an interdisciplinary team working closely with two further postdoctoral researchers for machine learning (Cambridge) and psychology-related (Sheffield) aspects of the project. At the OU, there will be weekly (online) team meetings with Dr Paul Piwek and Dr. Svetlana Stoyanchev (from Toshiba Research Europe).

Key Duties

- Lead the development of an annotated corpus, ensuring (among other things) reliability of the annotations, coordinating and checking quality of annotator work.
- Develop language generation templates from the annotated corpus.
- Develop hybrid generation strategies grounded in recent psychological findings, e.g. on open-mindedness.
- Collaborate with researchers at the OU and the project partners.
- Attend project meetings and research advisory group meetings.
- Write up research work for publication.
- Disseminate results by presenting findings at project workshops, international conferences and workshops.
- Assist with public engagement activities, such as consultations with and presentations to stakeholders, in accordance with the STFC Public Engagement Evaluation Framework.
- Carry out administrative tasks associated with the work (e.g. assisting with forms for ethics committee approval).
- Contributing to the development of further grant proposals which may extend the period of employment.
Other Duties

- Follow the University’s Research Ethics, Health and Safety and Equal Opportunities policies in the performance of your duties.
- Have a strong commitment to the principles and practice of equality and diversity.
- Attend appropriate staff development events.

Person Specification

Skills and Experience

Essential
- PhD in Computer Science or related area (completed or shortly obtained).
- Knowledge of Computational Linguistics/Natural Language Processing techniques, specifically those relevant for corpus development and language generation.
- Ability to design and coordinate corpus development work.
- Ability to analyse and process data from annotated corpora.
- Good programming skills, preferably in Python.
- Interest in research on dialogue systems and argumentation.
- Excellent communication skills, written and oral.
- Ability to work both collaboratively as part of an interdisciplinary team and independently as a researcher.
- Good organisational skills and ability to work to deadlines.

Desirable
- Publications in the areas related to the project.
- Experience of presenting research findings at international conferences.
About the Unit

The Faculty of Science, Technology, Engineering and Mathematics (STEM) is comprised:

- School of Computing & Communications
- School of Environment, Earth & Ecosystem Sciences
- School of Engineering & Innovation
- School of Life, Health & Chemical Sciences
- School of Mathematics & Statistics
- School of Physical Sciences
- Knowledge Media Institute
- Deanery including teams supporting Curriculum, Research and Enterprise, Laboratory Infrastructure and Faculty Administration

“We aspire to be world leaders in inclusive, innovative and high impact STEM teaching and research, equipping learners, employers and society with the capabilities to meet tomorrow’s challenges”

The Faculty of STEM consists of 2500 staff including 1,800 Associate Lecturers. The Faculty delivers over 185 modules across undergraduate and postgraduate curriculum, supporting nearly 19,000 students (full time equivalents) which is 29% of the OU total.

The Faculty generates more research income (circa £17M) than any other Faculty in the University, supported by a comprehensive laboratory infrastructure.

We are proud of our distinctive values and capabilities underpinning our aspiration:

*We are inclusive:*
- We transform people’s lives, ensuring STEM education is openly accessible to many thousands of students from diverse backgrounds – our students express high satisfaction with their study experience.
- We engage the public in exciting citizen science and engineering, including through free open educational resources, multi-platform broadcasting, outreach to inspire the next generation and with programmes to encourage more women into STEM.

*We are highly innovative:*
- We are at the forefront of innovative developments in teaching practical science and engineering at a distance, through simulated and remote access laboratories and practical experimentation.
- Our high-quality teaching and curriculum are informed by world-leading research, strong links with professional bodies and communities of practitioners, as well as by scholarship focused on continuously improving our STEM pedagogy.

*We deliver significant social and economic impact:*
- We provide STEM higher education at a scale and reach unsurpassed in the UK, with a sizeable international reach and further growth potential.
- We inject transferable STEM skills and knowledge direct into the workplace for immediate employee and employer benefit, as students combine study while working.
- The employability value of our courses is underpinned by accreditation from leading STEM Professional Bodies and Learned Societies, as well as partnerships and sponsorship with leading employers.
- Our high-quality, applied and academically relevant teaching and research addresses real-world issues, delivering impact for industry and society, including addressing pressing STEM skill shortages across the UK.