

Research Fellow (Natural Language Processing)

Department	Hunter Centre for Entrepreneurship (www.strath.ac.uk/huntercentre/)		
Faculty	Strathclyde Business School (www.strath.ac.uk/business/)		
Staff Category	Research	Reference No	287573
Reports To	Head of Department, through the PI	Grade:	8
Salary Range:	£41526 - £45361	Contract Type:	Fixed Term (26 months)
FTE:	1.0FTE (35 hours/week)	Closing Date	24/03/2020

Job Advert

We are seeking to recruit a capable data scientist (Research Fellow in Natural Language Processing) specialising on information extraction and retrieval, with previous experience in natural language processing and machine learning. The Research Fellow will take the ownership and responsibility of further development of the European Social Innovation Database (ESID). The successful candidate will demonstrate an understanding and interest of social innovation or willingness to developing domain expertise. The Research Fellow will be able to work proactively and demonstrate leadership.

About the Project

Social innovation is defined as “developing new ideas, services and models to better address social issues with inputs from public and private actors, including civil society, to improve social services” (see some social innovation project examples [here](#)). It is gaining increased practice, policy and scholarly attention, as one of the foremost types of the new forms of innovation. However, our knowledge of social innovation is still limited, primarily due to data unavailability. As part of a large EU funded project ([RISIS](#)), a team led by [Dr Abdullah Gök](#) (PI) is developing the comprehensive [European Social Innovation Database](#) (ESID) by utilising advanced text-mining and machine learning of the publicly available information on the web. We are building ESID on the work we previously conducted as part of another EU project ([KNOWMAK](#)).

Our approach in developing ESID is to utilise rich online information about social innovation projects and actors contained in a number of focused databases, project and actor websites and other sources that might contain relevant information (e.g. crowdfunding platforms). We utilise advanced text-mining and machine learning techniques to identify social innovation projects and actors and to discover a variety of their features (i.e. their social innovation type, location, their relationship to each other etc.). Our previous methodological work has been recognised as a novel application of text-mining outside of the bioinformatics and consequently published (see Milosevic et al ([2019](#)) and ([2018](#))) in prestigious outlets and received [awards](#). We are also working on a number of publications where we analyse ESID statistically to answer substantial social science questions. For more information on the current state of the ESID, see the [ESID manual](#).

We are now entering a second phase of the development of ESID where our focus will be identifying more projects from wider range of sources by employing advanced information retrieval approaches as well as extending and fine-tuning our information extraction techniques. The Research Fellow will be responsible to advance the existing work and take ownership of the development.

The wider [RISIS](#) project develops, harmonises and integrates 17 different databases on science and innovation policy including the ESID. It consists of 18 leading organisations across Europe. The Research Fellow will also be a part of this vibrant community.

We are establishing an interdisciplinary Research Group on Data Science for Studying Science, Innovation and Entrepreneurship, including a number of academic staff and PhD students. The Research Fellow will be an integral part of this research group.

The position is for 26 months, full-time, at the Research Fellow level, based at the [Strathclyde Business School](#).

As a leading international technological University we warmly welcome applicants from across the globe. A relocation package is available to support new employees who meet the eligibility criteria.

Please include the following documents in your application:

- A recent CV including a) links to GitHub repositories of your previous work and your previous publications.
- A cover letter indicating a) how you meet each of the person specification criteria below and b) your motivation to apply this role.

Informal enquiries about the post and detailed information about the project can be directed to Dr Abdullah Gök, the Principal Investigator (abdullah.gok@strath.ac.uk).

University of Strathclyde, Strathclyde Business School and Hunter Centre for Entrepreneurship

Founded in 1796 as a place of 'useful learning', the University of Strathclyde in Glasgow is a leading international technological university proud to deliver world class education, pioneering research and innovative partnerships around the globe. We utilise our internationally leading teaching, research and translational expertise to solve the key global challenges of our age. As a socially progressive institution, we focus on impact, pioneering technologies not just for their own sake but because they help society economically, in its health, quality of life and its creativity. We have a track record of partnering with businesses, reaching outside the University to make the world better educated, prosperous, healthy, fairer and more secure. As a result of this, we were recognised as Scottish University of the Year 2020 by The Sunday Times Good University Guide, and as Workplace of the Year in 2017, Business School of the Year in 2016, and Entrepreneurial University of the Year in 2013 by Times Higher Education. We are the first university to win the coveted Times Higher Education University of the Year title twice, in 2012 and again in 2019.

Founded in 1948, the University of Strathclyde Business School (SBS) is a pioneering, internationally renowned academic organisation that shapes and develops the business minds of tomorrow. Strathclyde Business School is one of four faculties forming the University of Strathclyde in Glasgow. We are a triple accredited business school: the first business school in Scotland to hold this accolade, and one of only 88 in the world (July 2018, MBA Today), to be triple accredited, holding accreditation from the international bodies, AMBA, AACSB and EQUIS. We have held all three accreditations since 2004. In addition to our international accreditation, Strathclyde has a reputation for research excellence. Based on the REF (Research Excellence Framework) 2014 GPA scores, the Times Higher Education ranked us first in Scotland and in the top 10 business schools in the UK for its research. Times Higher Education also ranked us 3rd in the UK for Impact of our business research, based on the REF's GPA scores, a measure of how the research impacts on practise in business.

Hunter Centre for Entrepreneurship is one of the seven departments of the Strathclyde Business School. Endowed by alumnus, entrepreneur and philanthropist Sir Tom Hunter, the Hunter Centre for Entrepreneurship is one of the most important social investments made by the Hunter Foundation. Sir Tom's support of the Hunter Centre is based on the simple premise that education changes people's lives - their aspirations, their sense of purpose, their skill base and what they can ultimately achieve. The Hunter Centre is focused on the study, research and encouragement of entrepreneurship and innovation. It's committed to engaging in, and drawing from, world class research to inform the design and delivery of a growing portfolio of useful learning experiences offered to 'Strathclyders' (students, staff and alumni) and also the wider entrepreneurial and innovation ecosystem. The Hunter Centre is now one of the largest university-based centres of entrepreneurship and innovation in the UK and is home to a team of recognised entrepreneurial and innovation experts.

Job Description

Brief Outline of Job:

The Research Fellow will assume the ownership and responsibility of further development of the European Social Innovation Database (ESID) by devising and implementing advanced information extraction and retrieval techniques. The successful candidate will be a capable data scientist specialising on natural language processing and machine learning. The Research Fellow will demonstrate an understanding and interest of social innovation or willingness to developing expertise in this domain. The Research Fellow will be able to work proactively and demonstrate leadership. He/she will also act as the project manager responsible for the organisation of the project work and the relationship with other partners.

Main Activities/Responsibilities:

1.	Assume the ownership and responsibility of the development of the European Social Innovation Database (ESID) by devising and implementing advanced information extraction and retrieval techniques.
2.	Engage as an independent researcher in individual and collaborative research, leading and/or contributing to high quality publications (scholarly papers, policy reports, etc.).

3.	Act as the project manager responsible for the organisation of the project work and lead/contribute/manage the work of others, providing direction, support and guidance.
4.	Work independently and proactively with minimal supervision.
5.	Develop strong relationships with external key stakeholders, including project partners, industry, policy and other academic bodies and where appropriate represent the project.
6.	Engage in continuous professional development and keep up to date with current knowledge and recent advances in the field/discipline.
7.	Build a strong working relationship with fellow researchers across Strathclyde, RISIS consortium and further afield to collaborate on research projects (both now and in the future).
8.	Undertake any other duties of equivalent standing as assigned by the Principal Investigator.

Person Specification

Educational and/or Professional Qualifications

(E=Essential, i.e. a candidate must meet all essential criteria to be considered for selection, D=Desirable)

E1 A PhD (or, exceptionally, equivalent professional experience) in Computer Science, Information Science or a cognate discipline

Experience

E2 Previous experience of information extraction, information retrieval, natural language processing and machine learning

E3 Previous experience of processing and analysing big, heterogeneous and unstructured data sets

E4 Proficient on the standard natural language processing and machine learning tools as well as scripting with Python and working with Linux servers

D1 Previous postdoctoral experience in a related field/project

D2 Experience of multi/inter-disciplinary research

D3 Willingness to learn about the domain (i.e. social innovation)

D4 Strong mathematical and/or statistical background

D5 Knowledge of R data science framework

Job Related Skills and Achievements

E5 A body of emerging research in high quality outlets demonstrating standards of excellence

E6 Ability to plan and organise research projects to ensure successful completion

E7 Ability to work within a team environment and to lead teams

D6 Experience of managing large and complex projects

Personal Attributes

E8 Excellent interpersonal and communication skills, with the ability to listen, engage and persuade, and to present complex information in an accessible way to a range of audiences

E9 Excellent spoken and written English language abilities

E10 Self-motivated and able to work flexibly either independently or as part of a multi-disciplinary team, build contacts and participate in networks for the exchange of information, and form relationships for collaboration

E11 Ability and flexibility to travel to attend meetings, conferences and workshops in the UK and overseas

Application Procedure

Applicants are required to complete an application form including the name of three referees who will be contacted before interview without further permission, unless you indicate that you would prefer otherwise. Applicants should also submit a Curriculum Vitae and a covering letter detailing the knowledge, skills and experience you think make you the right candidate for the job. Applicants should also complete the Equal Opportunities Monitoring Form.

Other Information

Further information on the application process and working at Strathclyde can be found on our website (<http://www.strath.ac.uk/hr/workforus>).

Rewards and Benefits

Our staff have access to a wide range of outstanding benefits that include financial rewards, family friendly and wellbeing benefits and career development opportunities, details of which can be found [here](#).

Conditions of Employment

Conditions of employment relating to the Research staff category can be found at: [Conditions of Employment](#).

Pre-employment health screening

An offer of appointment will be subject to a medical assessment by Occupational Health. An individual who accepts an offer of employment must complete a confidential medical questionnaire and forward it to the Occupational Health Nurse within 5 days of receipt. If further information is required the individual may be contacted by the OHN or a Medical Advisor and a personal appointment with the individual may be arranged. An unconditional contract of employment will not be issued until Human Resources receives confirmation that applicant is fit to undertake the duties of the post.

Probation

Where applicable, the successful applicant will be required to serve a 12 month probationary period.

Pension

The successful applicant will be eligible to join the Universities' Superannuation Scheme. Further information regarding this scheme is available from [Payroll and Pensions](#).

Relocation

Where applicable, the University offers a relocation package to support new employees who meet the eligibility criteria. The relocation package is offered as a contribution towards costs incurred, and is designed to be flexible, allowing staff to use the financial support available in the way that will be most helpful to them. Further details are outlined in the Relocation Policy.

Interviews

Formal interviews for this post are expected to be held on 07/04/2020.

Equality and Diversity

We value diversity and welcome applications from all sections of the community.

The University currently holds a Bronze Athena SWAN award, recognising our commitment to advancing women's careers in science, technology, engineering, maths and medicine (STEMM) employment in academia.

University Values

The University's Values capture what we're all about: who we are, what we believe in and what we stand for. [Our Values](#) have been derived from how we act and how we expect to be treated as part of Strathclyde.



Conditions of Employment

Research Staff

1. GENERAL CONDITIONS

Members of staff are subject to the Charter and Statutes and the Ordinances and Regulations of the University, published in the Calendar, and to any amendments or additions thereto approved by the University Court and, in the case of the Charter and Statutes, the Privy Council. Staff are also expected to familiarise themselves with, and adhere to, general University policies and procedures, as published on University web pages.

The University Court recognises Strathclyde Universities and College Union (SUCU) as the sole body with which it will negotiate and consult on all collective issues concerned with the terms and conditions of employment of Research Staff. Such terms and conditions may be varied by the University Court after negotiation and consultation with SUCU.

Each member of staff is responsible for the proper performance of allocated duties to the person or persons specified in the member of staff's letter of appointment and any accompanying papers.

The University is committed to ensuring that its business is conducted in an open and transparent manner and will take all appropriate steps to address risks of bribery or corruption. Members of staff are required at all times to act honestly and with integrity and to safeguard the resources for which they are responsible. The University has in place a robust Public Interest Disclosure (Whistleblowing) Policy to enable concerns to be brought to its attention. This is available at www.strath.ac.uk/publicinterestdisclosure. Other relevant policies, e.g. Fraud Prevention and Conflicts of Interests, can also be found on the University's website.

Any member of staff may at any time be exposed to commercially sensitive information, information related to potentially valuable intellectual property or information which may otherwise be of a confidential nature. This information, which could be found anywhere in the University, may be written or disclosed orally, can include information of a commercial or technical nature, and may be owned by the University or by third parties. The University requires all employees to keep any such information confidential in the first instance and not disclose, publish or otherwise disseminate it without prior consent of the University. Such confidentiality obligations are commonplace and in the commercial interests of the University. When in doubt advice should always be sought from Research and Knowledge Exchange Services prior to disclosure.

The University operates probationary periods for new staff, the duration of which will be specified in individual letters of appointment. The normal probation period for posts in this staff category is 9 months for those at grades 6 and 7, and 12 months for grades 8 and above. Further guidance on probationary procedures is published at <http://www.strath.ac.uk/staff/policies/hr/>.

Further guidance on probationary procedures is published at www.strath.ac.uk/hr.

Further information on the terms and conditions specified in this document and other staffing policies and procedures can also be found at www.strath.ac.uk/hr.

2. SALARY

Appointments are made at an appropriate salary point on the University's grading structure, with initial placing determined according to qualifications and experience. Increments are paid to staff on the 12 month anniversary of their appointment. Where this is not the first of the month, the increment will be paid on the first of the month directly

after the 12 month anniversary. This allows 1 progression to the next point on the salary scale until the top guaranteed point of the scale is reached.

Salaries are paid directly to staff members nominated bank account, normally on the second last working day of the month.

3. HOURS OF WORK

Working time is that required to fulfil the duties of the post. The University Court recognises that research staff carry out these duties in a variety of ways appropriate to the nature of the research activity, but expects regular contact to take place between the research staff employee and the supervisor/granholder (where these positions are occupied by different individuals) during normal working hours on week days. There are exceptions to this pattern which may involve contact at other locations or in the evenings, or at weekends, but these arrangement will be made with the agreement of the member of staff concerned.

Duties may, by arrangement with Head of Department/School/Director, include some teaching associated with the post (up to a maximum of 40 hours per semester) for which no additional payment will be made.

Additional work which does not fall within the scope of that described above may by arrangement attract payment which must be authorised and processed through the payroll.

4. HOLIDAYS

Annual leave entitlement is 31 days per year to be taken by agreement with the line manager. For staff members working on a part-time basis, holidays will be calculated on a pro-rata basis.

In addition to annual leave there is an entitlement to eleven public holidays per year which should be taken on days that the University is closed for this purpose. The University presently closes for four additional days over the Christmas and New Year period. **These additional days count against the annual leave entitlement.**

For staff members working on a part-time basis, public holiday entitlement will be calculated on a pro-rata basis.

Annual leave and public holiday entitlements should be taken in the leave year to which they relate. Up to five days leave can be carried forward into the new leave year subject to line management agreement. In exceptional circumstances, Heads of Department/School/Director may approve carry forward of accrued annual leave in excess of five days.

The University's expectation is that staff take all accrued holidays prior to their termination date. If staff have exceeded their entitlement the University will deduct an equivalent number of days pay from final salary payments.

5. SICKNESS ABSENCE

During any period of absence through illness or injury provided the appropriate notification and certification procedures have been followed the University will pay a member of staff (having taken account of the aggregate of all periods of absence due to illness during the twelve months immediately preceding the first day of the current absence) as follows:

Period of Continuous Employment at start of absence from work	Full Pay	Half Pay
Less than 1 year	1 month	1 month
1 year but less than 2 years	2 months	2 months
2 years but less than 3 years	4 months	4 months
3 years but less than 5 years	5 months	5 months
5 years or more	6 months	6 months

In order to manage the University's sick pay scheme the University requires to maintain sickness absence records on individual members of staff. When making payments after the expiry of statutory sick pay the University will deduct an amount equivalent to any benefit normally payable by the Department of Work and Pensions. For full details on the general University policy in this area please refer to the Sickness Absence Management Policy at www.strath.ac.uk/staff/policies/hr.

6. PENSIONS

If you are under age 75 at the date your appointment commences you will automatically become a member of the pension scheme operated by the University – the Universities Superannuation Scheme (USS). You will be admitted to the career revalued benefits scheme called the USS Retirement Income Builder, the contribution rate that currently applies is 9.6% of pensionable salary. A threshold applies to the maximum salary that counts towards the USS Retirement Income Builder. From 1 April 2019, the threshold is £58,589.70 per year. Contributions based on salary above the monthly equivalent rate of the threshold are paid to the defined contribution section of the scheme called the USS Investment Builder. Information regarding USS can be found in the scheme booklet located on the website: <https://www.uss.co.uk/members/members-home/resources/factsheets-and-member-guides>. The scheme booklet is called 'Your Guide to the Universities Superannuation Scheme'.

The exception to automatic membership of the pension scheme applies if your post is located out with the UK in an EU member state. If this is the case membership of USS is not available to you.

The University operates a salary exchange arrangement, Pensions Plus, for members of the USS. Pensions Plus enables pension contributions to be made in a manner so that both employees and the University can benefit from available National Insurance Contribution savings. You will be automatically included in Pensions Plus, provided it does not adversely affect your take-home pay or your ability to claim certain state benefits. If your earnings fall below the Pension Plus pay protection limit you will be opted out of Pension Plus. This will not affect your membership of the USS.

New members of staff may opt out of USS within three months of taking up appointment and will then be treated as if they had never been a member of the scheme. After three months members of staff who wish to withdraw from USS during their employment will be required to give a minimum of 28 days' notice in writing to the University. Any member of staff who wishes to opt out should contact the Pensions Section, Finance, in the first instance (pensions@strath.ac.uk). Please note that if you are a member of Pensions Plus and withdraw from USS with less than two years of membership, or cease employment with the University and have less than two years of USS membership, the option of a refund of pension contributions will not be available to you. Instead, USS must provide you with a pension benefit that is payable from your retirement date.

The University reserves the right to alter or withdraw Pensions Plus as it sees fit or as required to comply with legislative changes. Withdrawal or amendment of Pensions Plus will not affect your membership of USS. If you do not wish to participate in Pensions Plus but wish to remain in

the pension scheme please contact the Pensions Team who will provide you with a non-participation form.

Information regarding pension scheme membership can be found on the Pensions pages of the University's website. Full information regarding USS can be found on the USS website – www.uss.co.uk

7. PLACE OF WORK AND RESIDENCE

Members of staff will be based on the John Anderson Campus, unless otherwise stated in the letter of appointment. The Department/School in which the post is initially placed will be specified in the letter of appointment although there will be an expectation to work at such other places as required in the course of employment.

If the need arises for members of staff to work outside the UK for a period (or periods) of more than one month then such arrangements will be subject to mutual agreement. Members of staff would then be provided with a statement in advance setting out the terms covering such periods of employment.

The University does not normally place specific restrictions upon the place of residence of members of staff. All staff are, however, expected to reside in a location which is compatible with the satisfactory fulfilment of all the duties associated with their appointment.

8. CONSULTANCY/FURTHER ACTIVITIES

To support the strategic objectives of the University and to facilitate individual professional development, the University encourages staff to engage in professional activities with outside bodies related to their field of work. In many cases, such activity will be approved on the basis that it represents University knowledge exchange activity and should therefore be treated as part of the individual's overall workload and managed through the University's systems. It is also recognised that there will be some cases where an activity is entirely separate from the University and should thus be notified/approved as a personal business activity. For further information please refer to the "University Procedure in relation to Work for Outside Bodies including Consultancies", which forms part of the employment contract and can be accessed at www.strath.ac.uk/hr

9. DISCIPLINARY AND GRIEVANCE PROCEDURES

Further information on the University's disciplinary and grievance procedure can also be found at www.strath.ac.uk/policies/hr or on request from Human Resources.

10. NOTICE AND TERMINATION

Members of staff are employed on the conditions indicated in individual letters of appointment and any accompanying papers. The University is not obliged to give notice of termination or continue any employment beyond the end of that period. Where the period of the contract of employment is for one year or less it may be terminated short of the fixed term period by one months notice on either side. Where the period of the contract of employment is for more than one year, or where there have been a further contract or series of contracts immediately consecutive, the employment may be terminated short of the fixed term period by three months' notice on either side, except during the probationary period when the notice period is one month.

If the appointment is for a fixed term it will expire at the end of the period without the necessity for notice.

Revised April 2019