

Data Scientist (KTP Associate): Scottish Water

Department	Management Science (www.strath.ac.uk/mansci/)		
Faculty	Strathclyde Business School (www.strath.ac.uk/business/)		
Staff Category	Research	Reference No	24497
Reports To	Professor Lesley Walls (Academic supervisor) and Dr Athena Zitrou (Company Supervisor)	Grade:	Off scale
Salary Range:	Up to £28k + £4k personal development budget	Contract Type:	Fixed Term (24 months)
FTE:	1 (35 hours/week)	Closing Date	Sunday, 4 October 2015

Job Advert

We seek to appoint an ambitious and creative Associate to undertake an exciting and challenging Knowledge Transfer Partnership (KTP) project in collaboration with Scottish Water. The successful candidate will develop analytical tools to uncover causal trends in past water quality failures and develop predictive models to support planning of efficient interventions. This project is important because it informs strategic and operational decision making within Scottish Water, and will influence opportunities for savings and service improvement.

The Associate should have strong mathematical modelling skills and have, at least, an MSc in Operational Research, Management Science, Industrial Engineering, Statistics, or related discipline. Candidates should be interested in problem-solving and enjoy making sense of complex data. The Associate will have a generous training and development programme, and the opportunity to develop and embed market leading technology in one of Scotland's largest companies; contributing from day one to their ambitious asset management strategy that will impact every household and business in Scotland. Scottish Water is a publically owned company, answerable to the Scottish Parliament. Its job is to provide 1.3 billion litres of drinking water every day and take away 840 million litres of waste water daily. It has 5 million customers and employs 3,400 people. Details about the company can be found at <http://www.scottishwater.co.uk/>.

The Associate will work closely with the support and guidance of a team of analysts based within the Scottish Water Analytics Team, as well as with the academic supervisors, Professor Lesley Walls and Dr Matthew Revie. The Associate will also have the opportunity to work towards management qualifications through the KTP programme as well as to register for a higher degree through the Department of Management Science within Strathclyde Business School. The Department of Management Science is one of the UK's leading OR departments, with a reputation for impactful research and renowned MSc programmes in Operational Research and Business Analysis & Consulting. Details about the department can be found at <http://www.strath.ac.uk/mansci/>. During the recent Research Excellence Framework, Strathclyde Business School was ranked #1 in Scotland, and #5 in the UK.

The successful applicant will be based at the Scottish Water's new state of the art office in Stepps, just outside Glasgow. Although this is initially a 24 month post, the company sees huge potential for the successful candidate to progress to a permanent post within the company.

To discuss the post informally, contact Dr Matthew Revie (+44 141 548 4578, matthew.j.revie@strath.ac.uk) or Professor Lesley Walls (+44 141 548 3616, Lesley.walls@strath.ac.uk).

Job Description

Brief Outline of Job:

Under the general guidance and support of Professor Lesley Walls, Dr Matthew Revie, and the Scottish Water Analytics Team, the Associate will lead the development of analytical tools and predictive models for water quality for Scottish Water.

Main Activities/Responsibilities:

1.	Engage with key stakeholders to understand problem complexities and uncertainties
2.	Design and undertake data analysis to explore and understand causal trends in historical water quality
3.	Review methods currently used to inform development of conceptual predictive model for water quality
4.	Develop conceptual statistical models for water treatment system and identify appropriate case studies for implementation
5.	Refine predictive analytics model for implementation, verification and validation through multiple case studies
6.	Prepare reports for senior management within Scottish Water to inform future implementation of developed tool

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 Masters degree in Operational Research, Management Science, Engineering, Statistics, or related relevant discipline.

Experience

E2 Ability to analyse large complex data sets and make meaningful interpretations

E3 Ability to engage with stakeholders to structure complex problems.

D1 Ability to develop statistical models to solve complex industrial problems.

E4 Use statistical or mathematical software packages such as R, SAS, Matlab, etc.

E5 Ability to problem solve

E6 Planning and managing projects to successful completion

Job Related Skills and Achievements

E7 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

E8 Ability to work independently and as part of a multi-disciplinary and/or cross-disciplinary team

E9 Ability to work under pressure and driven to deliver results

Personal Attributes

E10 Open and willing to undertake new challenges and learn new skills

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>).

Informal enquiries about the post can be directed to Dr Matthew Revie (+44 141 548 4578, matthew.j.revie@strath.ac.uk) or Professor Lesley Walls (+44 141 548 3616, Lesley.walls@strath.ac.uk).

Probation

Where applicable, the successful applicant will be required to serve a 9 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 will be held on Monday, 26 October 2015.

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.

