



THE POST

College:	Engineering, Mathematics and Physical Sciences
Post:	Data Scientist (KTP Associate)
Reference No:	P62080
Grade:	F
Reporting To:	Prof Dragan Savic

This KTP programme is a partnership between the University of Exeter and Artesia Consulting Ltd. You will be employed by the University of Exeter, but will spend the majority of your time working on this project at the company premises in Yate, near Bristol.

The Company

Artesia Consulting Ltd offers specialist consultancy in water resource management, water efficiency and conservation, leakage management, smart metering and demand management. The company works in the UK and international water supply industry. More information can be found at: <http://artesia-consulting.co.uk/>.

KTP (Knowledge Transfer Partnerships)

KTP offers a high calibre graduate the opportunity to accelerate their career by gaining extensive technical and client-facing experience at Artesia and receive a tailored development programme. Further information on Knowledge Transfer Partnerships can be found on <http://ktp.innovateuk.org/>.

The successful candidate will work with Artesia Consulting Ltd and academic supervisors from the University of Exeter, College of Engineering, Mathematics & Physical Sciences.

Job Description

Main purpose of the job:

The successful post-holder will work closely with both the academic team and Artesia Consulting Ltd to develop a Tactical Leakage Control product that provides water utility companies with an Economic Decision Support Tool for the detection and repair of distribution and trunk mains leakage. They will be responsible, in conjunction with their Industry and Academic supervisors, for managing and driving forward this project to develop and embed the relevant expertise and develop a market-ready product.

Main duties and accountabilities:

- Developing an in-depth analysis and understanding of Artesia's working practises and business model;
- Analysis of requirements and development of the Decision Support Tool;
- Development, application and testing of Machine Learning and Optimisation techniques to automate and support decision making in leakage detection and repair;
- Designing a Graphical User Interface;
- Implementation and testing of the Decision Support Tool;
- Embedding the new tools and skillsets in Artesia through training and documentation;

- Product launch and marketing activities;
- Write up research work for publication in journals and presentation at conferences, supported by the academic team;
- Manage the programme and ensure that the equipment and consumables, associate development and travel and subsistence elements of the budget are used efficiently and responsibly;
- To engage in continuous professional development and to be responsible for continually updating knowledge and understanding in this field of study or specialism and for developing skills whilst ensuring this is undertaken in a timely manner and does not impact on other stakeholders, the project or University;
- May be required to supervise undergraduate / postgraduate students who will provide additional support to the project;
- As a KTP is a partnership between a University and a company, the post-holder will report to an Academic and Industrial Supervisor and will be expected to work to tight deadlines within a pre-scoped 24 month work programme;
- Report on a monthly basis to both the industrial and academic supervisors. Decisions concerning the Programme will be taken in consultation with all parties;
- Make four-monthly presentations to the Local Management Committee, which is responsible for seeing that the programme objectives are met and that the Company, the University and the Associate all gain the expected benefits;
- Whilst key decisions regarding expenditure and overall direction of the programme are taken jointly, it will be expected that the post-holder takes the lead in providing recommendations on which to base these decisions;
- To use research resources, laboratories and workshops as appropriate and to take responsibility for reducing hazards and for the health and safety of others. Where appropriate, will also be responsible for conducting risk assessments;
- Maintaining data and documentation, keeping accurate written and computerised records and ensuring data is stored securely and managed in accordance with the Data Protection Act;

This job description summarises the main duties and accountabilities of the post and is not comprehensive: the post-holder may be required to undertake other duties of similar level and responsibility.

Person Specification

Competency	Essential	Desirable
Attainments/Qualifications	Masters or very good first degree in Computer Science, Mathematical Sciences, Engineering or related discipline or equivalent	PhD in Computer Science, Mathematical Sciences, Engineering or a related field of study
Skills and Understanding	Sufficient knowledge of machine learning and mathematical modelling to develop new tools under supervision Programming proficiency in technical computing languages such as R, Python, Julia or Matlab Mathematical expertise around optimisation routines, complex algorithms, and ability to apply	Evidence of research activity and published research. Knowledge and experience in lower level languages such as C++ or Fortran Familiarity with databases Knowledge of high performance computing and code optimisation techniques

	<p>novel solutions across industries</p> <p>Excellent communications skills (both written and oral) with ability to communicate complex and conceptual ideas to a range of groups</p> <p>Ability to train others and disseminate new information</p> <p>Ability to build contacts and participate in internal and external networks for the exchange of information</p> <p>Good organisational skills with the ability to prioritise and meet deadlines under pressure.</p> <p>Excellent administration skills</p>	
Prior Experience	<p>An interest in and affinity with business operations and processes</p>	<p>Experience of working in a business environment</p> <p>Familiarity with software design (including version control, automated testing and documentation)</p>
Behavioural Characteristics	<p>Flexible, enthusiastic and self-motivated</p> <p>A creative thinker with the ability to find innovative and relevant solutions to problems</p> <p>Ability to work independently as well as part of a team</p> <p>Ability to work effectively with all levels of people</p> <p>Willing and proactive in engaging in continuous professional development</p>	
Circumstances	<p>Willing to work flexibly to achieve project demands</p>	

Terms & Conditions

Our Terms and Conditions of Employment can be viewed [here](#).

Further Information

Please see our [website](#) for further information on working at the University of Exeter.