

RECRUITMENT PACK

This document includes the following information:

- Job Description
 - Person Specification
 - Additional information
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Making an application:

Please complete the short on-line application form, which includes some standard questions, and attach the following documents. (Shortlisting is undertaken by a panel after the closing date on the basis of information provided.)

- a. A covering letter - explaining why you are interested in this post, and giving examples to demonstrate how you meet the requirements of the job as outlined in the Person Specification.
 - b. A curriculum vitae - giving full details of your qualifications and experience to date.
- Links to Guidance Notes and Frequently Asked Questions can be found on the Search Results page. These pages will open in a new window.
 - **We recommend that you take a copy of this recruitment pack to help with your preparation.**

A commitment to sustaining an inclusive and diverse community is one of the University's Core Values and we are keen to address any imbalances in our workforce.

The University of Essex is proud to be part of the Disability Confident scheme and is committed to supporting diversity and equality, representative of our inclusive community. As part of our commitment to this scheme any candidate who has a disability and meets all the essential criteria for the role will be offered an interview. We also work in partnership with national disability organisation [DisabledGo](#) who provide detailed online access guides to many of our campus buildings and facilities which you may find useful.

Please note: We are only accepting on-line applications for this post. However, if you have a disability that makes it difficult for you to provide us with information in this way, please contact the Resourcing Team (01206 876559) for help.

Closing Date: 15 November 2018

Interviews are planned for: 07 December 2018



JOB DESCRIPTION – Job ref REQ01936

Job Title:	Data Scientist (KTP Associate)
Contract:	Fixed-term, full-time. The position is fixed-term for 36 months due to being part of a government funded innovation programme, however there may be potential to continue in employment with the company partner following the completion of the KTP.
Hours:	37.5 hours per week (standard working week for host company)
Salary:	£26,500 per annum
Department/School/Section:	School of Computer Science and Electronic Engineering
Responsible to:	Head of School Prof Anthony Vickers
Responsible to on a day to day basis:	Dr Ana Matran-Fernandez / Dr Renato Amorim, Academic Supervisors, University of Essex Damien Bayart, Host Company Supervisor
Location:	This post will be based with the Applied Research team: British Telecom Orion 5 PP5 Adastral Park Martlesham Heath Ipswich, Suffolk IP5 3RE Occasional travel will be required to the BT Consumer office in London.

Purpose of the Job:

The University of Essex in partnership with BT Consumer and BT Applied Research offers an exciting opportunity for a graduate to develop new state of the art machine learning techniques to improve BT's understanding of service consumption across multiple channels in order to optimise customer interactions.

The Associate will investigate, develop, test, compare and report on multiple techniques such as unsupervised and semi-supervised learning, reinforced learning, causal inference, etc. to deliver solutions that provide next best action recommendations such as appropriate offers and incentives. The implementation of these techniques will enable timely and specific interactions with customers to improve customer loyalty as well as satisfaction and return on investment. The Associate will benefit from working closely with operational BT teams and relevant BT datasets.

Duties of the Post:

The main duties of the post will include:

Technical and Research Duties

- Complete and review technical needs audit and market report.
- Investigate and report on the strengths and weaknesses of state of the art Machine Learning (ML) and Artificial Intelligence (AI) techniques (advanced clustering, reinforcement learning and causal inferences) in the context of the project.
- Iterate development of ML models using selected techniques. Provide comparisons with existing knowledge and techniques and interpretable rules, and propose ways they could be implemented by operational teams.
- Draft research papers for conferences and publication, collaboratively with the academic team.
- Simulate, test, analyse and collate results for reports, presentations and publications.

Project Management Duties

- Organise regular technical project reviews with the academic team and BT.
- Work collaboratively with the Consumer and Applied Research teams at BT, academics and researchers at the University.
- Deal with project issues which may affect commercial and research objectives and deadlines.
- Provide regular updates on progress to the project team via oral and written reports and presentations.
- Manage the project risk log.
- Manage project budgets, specifically travel, consumables and personal development budgets.
- Embed knowledge within the company, training staff and creating training manuals.

These duties are a guide to the work that the post holder will initially be required to undertake. They may be changed from time to time to meet changing circumstances.

October 2018

PERSON SPECIFICATION

JOB TITLE: Data Scientist (KTP Associate)	POST REF: REQ01936
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Qualifications /Training

	Essential	Desirable
▪ BSc in Computer Science or a related discipline.	x	
▪ MSc in Statistics, Data Science, Computer Science, Mathematics or a related discipline.		x
▪ PhD in Computer Science, Data Science and aligned fields.		x

Experience/Knowledge

	Essential	Desirable
▪ Good theoretical and applied knowledge of mathematical methods for data science, including foundational topics such as calculus, linear algebra, statistics and optimisation, machine learning.	x	
▪ Knowledge of database systems and data wrangling.		x
▪ Knowledge of Python, R or Matlab and their relevant data science stacks.		x
▪ Knowledge of Neural Networks and the relevant python libraries.		x

Skills/Abilities

	Essential	Desirable
▪ Effective communication skills to be able to work collaboratively in a small team	x	
▪ Ability to work to deadlines	x	
▪ Good command of written and spoken English	x	
▪ Ability to work independently and as part of a team	x	
▪ Proactive and committed to the project	x	

Other

	Essential	Desirable
▪ An understanding of, and commitment to, equality and diversity	x	
▪ Can meet the requirements of UK 'right to work' legislation *	x	

* The University has a responsibility under the Asylum, Immigration and Nationality Act 2006 to ensure that all employees are eligible to work in the UK. Prior to commencing employment, the successful candidate will be asked to provide documentary evidence to this effect. The University may be able to offer Tier 2 Sponsorship for this role. For further information about UK immigration requirements please follow this link <https://www.gov.uk/government/organisations/uk-visas-and-immigration>

Working at the University of Essex

The University of Essex is proud to be:

A leading academic institution with an international reputation for the quality of its research and teaching and an international community that is committed to equality and diversity.

Knowledge Transfer Partnerships (KTP)

A Knowledge Transfer Partnership (KTP) is a three-way project between a company, a University and a graduate (known as an Associate), which enables the transfer of knowledge, technology and skills to which the company currently has no access. Supported by the university, KTP Associates manage strategic projects within the company.

A KTP can help graduates to enhance their career prospects by providing them with an opportunity to manage a challenging project, which allows them to use their degree, and is central to an organisation's strategic development and long term growth.

Whilst the Associate leads the KTP project, they are supported by experienced staff from the company and university. They are also assigned a KTP Adviser, who supports them in maintaining good working relationships within the partnership and in planning their professional development in broad terms.

For more information, visit <http://ktp.innovateuk.org>.

British Telecommunications PLC

BT is a British multinational telecommunications company with head offices in London, United Kingdom. It has operations in around 180 countries and is the largest provider of fixed-line, mobile and broadband services in the UK, and also provides subscription television and IT services.

School of Computer Science and Electronic Engineering

The School of Computer Science and Electronic Engineering comprises 1,200 students from more than 75 countries, supported by 170 academic, research and support staff. The school is conducting world-leading research in areas such as evolutionary computation, brain-computer interfacing, intelligent inhabited environments and financial forecasting, and boasts the largest robotics research group of its kind in the UK.

For more information, visit <https://www1.essex.ac.uk/csee/about/default.aspx>.

General Information

Informal enquiries may be made to the project Academic Supervisor, Dr Ana Matran-Fernandez / Dr Renato Amorim (emails: amatra@essex.ac.uk, r.amorim@essex.ac.uk) or Robert Walker, KTP Manager (tel: 01206 874076 email: r.walker@essex.ac.uk). However, applications must be made online.

KTP is funded by a UK Government grant and this appointment carries no expectation of extension beyond the end of the fixed-term contract.

In principle, previous KTP Associates are not eligible to apply. There are some circumstances where a previous Associate can apply for a new KTP. Please check with your previous KT Adviser for information.

Please note that the role holder will be based at BT located in Ipswich, Suffolk, but may be expected to travel to the University of Essex Colchester Campus and BT's London Office's from time to time.

People Supporting Strategy

Please find a link to the People Supporting Strategy.
<http://www.essex.ac.uk/hr/policies/docs/people-oct15.pdf>

Benefits

Our staff and students are members of the University for life. We believe a person's potential is not simply defined by grades or backgrounds, but by a willingness to question, to collaborate and to push at the edges of knowledge and their own potential.

As an employer we offer a range of benefits and a commitment to career development and equal opportunities in an environment that both reflects and creates a rich interaction of people, disciplines and ideas.

- Pension scheme
- Generous holiday entitlement
- Competitive salaries
- Training and development Family Friendly policies
- On campus childcare facilities, for more information visit www.wivenhoeparkdaynursery.co.uk
- Childcare vouchers
- Relocation package for qualifying staff
- Interest free season ticket loan
- Range of optional salary exchange tax benefits (pension, childcare and bicycle schemes)

No smoking policy

The University has a no smoking policy

October 2018