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KTP Associate Post Details	
Company partner / Lead Department	Clearswift RUAG Cyber Security / Department of Computer Science
Job Title	Associate Software Engineer (KTP Associate)
Job Family	Research & Teaching
Responsible to	Company Supervisor, Knowledge Base Supervisor & Knowledge Base KTP Manager.
Responsible for (Staff)	n/a
<p><u>Introduction</u></p> <p>Knowledge Transfer Partnership (KTP) is a graduate recruitment scheme that helps a RECENT graduate (the KTP Associate) transition from university life in to a career in industry with the aim of making a manager of tomorrow.</p> <p>A KTP is a collaborative project between a university and a company. In this instance, the post holder will be employed by the University of Surrey, but based at Clearswift RUAG Cyber Security in Theale, Reading. The University academics are a key part of the knowledge transfer, as such, contact with the academics will be maintained through regular meetings at the company and occasional visits to the University of Surrey by the KTP Associate.</p> <p>We are looking for a recent graduate who has the drive to take responsibility for leading and delivering this strategic and innovative project with the support of leading academics and key company personnel. The post holder will be expected to fully utilise and develop their expertise, they will also manage a generous training budget which is provided specifically for further development of both technical and managerial knowledge.</p> <p>If you want to fast-track your commercial career while applying your technical expertise gained through academic study in a real-world context, then this KTP could be for you.</p> <p>Further information is available at: www.ktponline.org.uk.</p>	
<p><u>Job Purpose Statement</u></p> <p>Clearswift develop unique cyber security solutions. With commercial losses from cyber threats amounting to many millions of dollars worldwide, our solutions must demonstrate significant advantages and Return on Investment to our customers.</p> <p>This 24-month Knowledge Transfer Partnership (KTP) project is co-funded by Innovate UK, DMCS (Department for Culture, Media & Sport) and Clearswift Ltd.</p> <p>The objective of this KTP is the research and development of new approaches to address the problems of Business Email Compromise (BEC), the largest cyber security threat in terms of lost money, according to FBI reports. The project will identify/develop new ways of deploying intelligent systems that require minimal human intervention to deliver new BEC combating technology</p> <p>The successful candidate will be responsible for managing and driving this innovative KTP project and embedding new knowledge within both the organisation and the University of Surrey.</p>	

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Key Responsibilities This document is not designed to be a list of all tasks undertaken but an outline record of the main responsibilities (5 to 8 maximum)

1. Lead and drive an innovative KTP project, bringing together the University and Clearswift teams as one.
2. Assist Clearswift and the University of Surrey to collaborate effectively.
3. Research and classification of Business Email Compromise (BEC) issues.
4. Analyse patterns, characteristics and derive learning algorithms
5. Develop, Test, and Refine rule-based machine learning software.
6. Combine scientific knowledge in multiple fields and apply it.
7. Embed new knowledge in Clearswift and the University of Surrey.
8. Produce high-quality research outcomes with game-changing, real world impact.
9. Prioritisation of issues/lines of research, based on ROI: Selection & Definition of specific problem; Research & Development towards a productised solution



N.B. - The above list is not exhaustive.

The KTP Associate is expected to:

- Positively support equality of opportunity & equity of treatment to colleagues and students in accordance with the University of Surrey Equal Opportunities Policy, and in line with company policies.
- Work to achieve the aims of our Environmental Policy and promote awareness to colleagues and students, and in line with company policies.
- Follow the University/departmental and company partner's policies and working practices in ensuring that no breaches of information security result from their actions.
- Ensure they are aware of and abide by all relevant University / Company / KTP Regulations and Policies relevant to the role.
- Undertake such other duties within the scope of the KTP as may be requested by your Supervisors or Line Manager.
- Work supportively with colleagues, operating in a collegiate manner at all times.
- Ensure that confidentiality (in all forms) is maintained at all times.

Help maintain a safe working environment by:

- Attending training in Health and Safety requirements, as necessary, both on appointment and as changes in duties and techniques demand.
- Following local codes of safe working practices and the both the University of Surrey and the company partners Health and Safety Policy.

Elements of the Role

This section outlines some of the key elements of the role, which allow this role to be evaluated within the University's structure. It provides an overview of what is expected from the post holder in the day-to-day operation of the role.

Planning and Organising

- The KTP project has been identified by the company partner and the University of Surrey.
- A detailed work plan has been created and will form the basis of this 24 month KTP project.
- The Associate will take a key role in steering and shaping the project strategy.

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<p><u>Problem Solving and Decision Making</u></p> <ul style="list-style-type: none"> Challenges: Identify employee behaviour related to handling sensitive materials; embed knowledge advancement directly into practice; Combine scientific knowledge in different fields, including data analysis and clustering, machine learning and cyber security and apply it to DLP. The Associate should have the ability to work independently, as well as working collaboratively with the company partner and the university academics, ensuring that all parties remain engaged with the KTP project. Both company and university teams will collaborate around the KTP Associate role in order to support efforts, resolve issues, review progress and strategy of the KTP. You will be expected to be the catalyst to make this effective. 	
<p><u>Continuous Improvement</u></p> <ul style="list-style-type: none"> Whilst a work plan has been identified, the Associate is expected and encouraged to look for and agree other opportunities to add value to the collaboration. In our agile working environment, all are expected to review, analyse and adapt all practices, whether in software engineering, process and/or communications. 	
<p><u>Accountability</u></p> <ul style="list-style-type: none"> There will be regular opportunities for the Associate to present the progress of their KTP and achievements. A KTP is a collaborative project, you will be expected to work with your team to manage and exceed the outcomes of your KTP project. As the Associate, you will report to both company and university staff. 	
<p><u>Dimensions of the role</u></p> <ul style="list-style-type: none"> As part of the KTP the Associate will: <ul style="list-style-type: none"> Plan, organise and record regular technical reviews. Manage the project (to include forecasting & financial management). Plan and organise quarterly progress meetings. 	
<p><u>Supplementary Information</u></p> <ul style="list-style-type: none"> Driving innovation that will transform the DLP market. A generous training budget. Potential opportunity to publish research papers with the Academics. Access to comprehensive University of Surrey learning and development courses. Opportunity to take part in further professional training courses. 	
<p>Person Specification This section describes the sum total of knowledge, experience & competence required by the post holder that is necessary for standard acceptable performance in carrying out this role.</p>	
Qualifications and Professional Memberships	Essential/ Desirable
MSc in Computer Science including Artificial Intelligence; Machine Learning; Information Security or a closely related subject.	E
First degree in Computer Science or Electronic Engineering or a closely related subject 2.1 or above.	D
English Language at minimum IELTS 7.0 (or a degree qualification studied in an English speaking country e.g. USA or UK) or native English speaker or degree obtained from the UK.	E

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Technical Competencies (Experience and Knowledge) This section contains the level of competency required to carry out the role (1 being low – 3 being high).	Essential/ Desirable	Level 1-3
Practical experience of writing Java	E	3
Development experience of building own software systems & working with a team (including University experience)	E	3
Experience of developing backend (command-line tools and/or services)	E	2
Experience of developing frontend (GUI)	D	1
Good soft skills such as communications, presentations, time management, & teamwork	E	2
Good understanding of computer networks, email services & distributed software systems	E	2
Practical skills of applying one or more artificial intelligence techniques to real-world problems ideally one related to cyber security such as intrusion detection or anomaly detection (including skills gained through academic study)	E	3
Special Requirements:		Essential/ Desirable
Good understanding of artificial intelligence (machine learning & data mining) techniques		E
Ability to absorb knowledge and develop skills during the KTP		E
Core Competencies This section contains the level of competency required to carry out this role. (Please refer to the competency framework for clarification where needed). n/a (not applicable) should be placed, where the competency is not a requirement of the grade.		Level 1-3
Communication		3
Adaptability / Flexibility		2
Customer/Client service and support		2
Planning and Organising		3
Continuous Improvement		2
Problem Solving and Decision Making Skills		3
Managing and Developing Performance		2
Creative and Analytical Thinking		3
Influencing, Persuasion and Negotiation Skills		2
Strategic Thinking & Leadership		2
<p>This Job Purpose reflects the core activities of the KTP post. As the partnership and the post holder develop, there will inevitably be some changes to the duties for which the post is responsible, and possibly to the emphasis of the post itself. The University expects that the post holder will recognise this and will adopt a flexible approach to work. This could include undertaking relevant training where necessary.</p> <p>Should significant changes to the Job Purpose become necessary, the post holder will be consulted and the changes reflected in a revised Job Purpose.</p>		
Organisational / Departmental Information & Key Relationships		
<p><u>Background Information</u></p> <p>The working hours, annual leave and holiday entitlement is that of Clearswift.</p> <p>The normal hours of work will be 37.5 hours per week. Flexible working hours apply however the</p>		

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Associate's hours of attendance will be based around normal office hours of 9.00am to 5.30pm Monday to Friday.

Clearswift's annual leave entitlement is 25 working days + Bank Holidays days leave per year. The holiday year runs from the 1st January to 31st December each year.

Please also see www.Clearswift.com and <http://ktp.innovateuk.org/>

Relationships *This is not an exhaustive list of every relationship the post holder has, but is a brief description of those that play an important part in the post holder successfully carrying out the role.*

The post holder will work closely with both the Company Supervisor and Knowledge Base Academics and liaise with the University of Surrey's KTP Office. The post holder will also have the opportunity of networking with other KTP Associates and will be expected to meet regularly with professionals from Clearswift and their client base, who will provide feedback on the scope and progress of the project.

Internal

- KTP Office
- Clearswift KTP team
- Academic KTP team
- University of Surrey Students / Staff
- Clearswift Staff

External

- Innovate UK - KT Adviser
- Other KTP Associates
- Clearswift Clients

Special Requirements

The post holder must be prepared to work outside normal working hours when required and must be willing to undertake further studies.

The Associate will be required to travel to the University of Surrey, as well as travel between Clearswift sites and occasionally more widely.

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