

Job Description

Job title: Application Security Engineer (KTP Associate)

Faculty/Directorate: Technology, Arts and Culture

Grade: E23 £31,637 to E25 £33,482

Role profile: SSE4

Full time

Fixed term: 18 months

Duties of the role	
Role Outline	De Montfort University is seeking a motivated and talented Software Engineering / Cyber Security / Computer Science graduate with expertise in Secure Coding and Artificial Intelligence (AI) to be part of an exciting Knowledge Transfer Partnership (KTP) project in collaboration with Swipe and Tap Limited. This 18-months KTP project aims to develop a bespoke secure-by-design software solution that enables continuous and affordable security validation of web, mobile and API services for Swipe and Tap Limited.
About Us	<p>This project is funded by Innovate UK via the KTP programme, which enables the business to bring in new skills and the latest academic thinking to deliver a specific, strategic innovation project.</p> <p>De Montfort University is a university of quality and distinctiveness, distinguished by our life-changing research, dynamic international partnerships, vibrant links with business and our commitment to excellence in learning, teaching and the student experience.</p> <p>Swipe and Tap Limited is an established software development company delivering bespoke web and mobile applications for commercial clients, combining product design, development, and ongoing support.</p> <p>Swipe and Tap Limited aims to grow commercially by strengthening its secure-by-design capability, providing faster, clearer security assurance to clients by embedding automated security validation and standards-mapped reporting into everyday delivery workflows.</p>
Overall purpose of the role	<p>Based at Swipe and Tap Limited office, in Leicester, with occasional visits to De Montfort University, the Application Security Engineer (KTP Associate) will support the company in embedding secure software development methodologies, continuous security validation practices and secure data management to their organisational processes and future projects.</p> <p>The post holder will:</p> <ul style="list-style-type: none"> • Work closely with Swipe and Taps team to design and build a robust, scalable security validation capability that supports continuous testing across web, mobile and API applications, following secure software development best practices. • Take the responsibility of ensuring the usability, robustness and security of the developed solution through systematic quality assurance, stakeholder feedback activities, and seamless integration within existing development and delivery workflows (for example, version control and CI/CD practices). • Remain aware, through literature review, training and other research activities, of current technological advancements in relation to the requirements of the project, allowing knowledge transfer to upskill the relevant staff within Swipe and Tap Limited. • Produce high standard periodic project progress reports, deliver presentations to the

Duties of the role

supervisory team, local management committee and relevant stakeholders, and disseminate findings and project outputs in peer reviewed 3*/4* academic publications.

The KTP associate leads the strategic business project with support from the university and business teams. Applying academic knowledge to a real-world challenge, a KTP is a chance to deliver impact and shape your career. There is also a training and development budget which allows you to further enhance your personal and professional development.

Main duties and responsibilities

The main responsibilities of the post holder are:

- Audit existing software delivery processes, tooling and IT infrastructure at Swipe and Tap Limited.
- Define and maintain Key Performance Indicators (KPIs) and project requirements.
- Define and maintain data management plan, project plan, and risk register.
- Design a modular solution architecture to support continuous security validation across web and mobile applications and APIs.
- Implement a penetration testing approach that is safe, repeatable and suitable for routine use, with appropriate scoping, environment controls, and evidence capture.
- Develop and integrate automated vulnerability assessment components suitable for modern software delivery.
- Integrate AI-assisted capabilities in a controlled and ethical manner to support vulnerability triage and prioritisation.
- Plan and lead feedback gathering activities from relevant stakeholders.
- Maintain project timeline, and present progress to local management committee.
- Remain aware of relevant technological advancements through research activities.
- Upskill relevant staff and embed technical knowledge within Swipe and Tap limited.
- Contribute to meetings and scholarly dissemination linked to the KTP.
- Disseminate project outputs in peer reviewed high impact factor academic publications.
- Create technical manuals, periodic project progress reports, and final project report.

This job description reflects the main duties and receptibilities of the post. However, the post holder may be required to perform any other duties commensurate with the job grade as reasonably required from time to time.

Act in accordance with DMU Values:

- Collaborative – Work together to achieve joint outcomes, understand how your work contributes to DMU, and be aware of your personal impact on others.
- Compassionate – Be open, honest, and caring, work on a basis of trust, and hold yourself accountable for your actions.
- Creative - Strive for better, challenge bureaucracy, explore digital solutions, and innovate creatively.
- Community minded - Embrace alternative views, treat others with respect, and tackle inequalities.

Treat all DMU staff, students, contractors and visitors with dignity and respect. Provide a service that complies with the Equality Act 2010, eliminating unlawful discrimination, advancing equality of opportunity and fostering good relations with particular attention to the protected characteristics of age, disability, gender reassignment, marriage and civil partnership, pregnancy and maternity, race, religion or belief (or none), sex and sexual

Duties of the role
<p>orientation.</p> <p>All members of staff are responsible for their contribution to improved environmental performance and in reducing greenhouse gas emissions at DMU. It is therefore required that all members of staff are aware of how the Environmental Policy relates to their own role at the University. Staff conduct must reflect the values inherent in the Environmental Policy and where required staff must cooperate with environmental compliance and conformance requirements to help minimise our emissions to air, water and land.</p> <p>The postholder should have a positive attitude towards health and safety, and be aware of and comply with all health and safety policies for the university, as applicable. There will be a requirement to complete all mandatory health and safety training as deemed to be relevant for the position held. The postholder is expected to help maintain a safe working environment for staff, students and visitors by working closely with the local safety coordinator as required. Any accidents or dangerous incidents must be reported promptly through the university's reporting system.</p>

Person Specification

Job Title: Application Security Engineer (KTP Associate)

Faculty/Directorate: Technology, Arts and Culture

Grade: E23 £31,637 to E25 £33,482

Role profile: SSE4

Full time

Fixed term 18 months

Area of responsibility	Requirements	Essential or desirable		*Method of assessment			
				A	I	T	D
Qualifications & Training	Bachelor's degree (2:1 or higher) in Software Engineering, Cyber Security, Computer Science, or related disciplines	Essential		✓			✓
	Higher degree (MSc/PhD) in a relevant field or equivalent industrial experience		Desirable	✓			✓
	Relevant formal certification in secure coding, application security testing or penetration testing.		Desirable	✓			✓
Previous Work Experience	A minimum of one year of relevant industrial experience	Essential		✓	✓		
	Demonstrable experience undertaking research projects		Desirable	✓	✓		
	Experience managing a application security project		Desirable	✓	✓		
	Experience building or integrating security testing and automation into software delivery pipelines		Desirable	✓	✓		
Knowledge and Experience	Proficient knowledge of one or more programming languages, e.g. C++, Python, Java	Essential		✓	✓	✓	
	Strong knowledge of continuous integration and continuous delivery/deployment (CI/CD) pipelines	Essential		✓	✓		
	Strong knowledge of security software development practices	Essential		✓	✓		
	Wide experience with code review and debugging, QA and test automation tools and frameworks	Essential		✓	✓		
	Strong knowledge of application security testing e.g., IAST, SAST,	Essential		✓	✓		

Area of responsibility	Requirements	Essential or desirable		*Method of assessment			
				A	I	T	D
	DAST						
	Good knowledge of Machine Learning / Artificial Intelligence (AI) algorithms	Essential		✓	✓		
	Strong knowledge of data protection principles and experience handling confidential data		Desirable		✓		
	Wide experience handling confidential data		Desirable	✓	✓		
Skills and Abilities	Strong analytical and problem-solving skills	Essential		✓	✓		
	Strong organisational, interpersonal and time-management skills	Essential			✓		
	Strong communication, presentation and report writing skills for both technical and non-technical audiences	Essential		✓	✓		
	Ability to work effectively both independently and as part of a team	Essential			✓		
	Ability to learn new skills, and to develop original techniques, algorithms and methods	Essential			✓		
	Committed to personal development, and to adapt to new technologies and methodologies	Essential		✓	✓		
	Ability to interpret business requirements and to manage strategic alternative solutions		Desirable		✓		
Our Values and Behaviours at DMU							
Collaborative	Support colleagues to achieve outcomes whilst being aware of personal impact of individual contribution and impact on colleagues	Essential			✓		
Compassionate	Act openly and honestly, showing care to others and holding oneself accountable for own actions	Essential			✓		
Creative	Striving for better, offering constructive challenge to creatively explore solutions and innovations to improve	Essential			✓		
Community-minded	Treating others with respect, demonstrating empathy and embracing alternative views and values whilst seeking to tackle inequalities	Essential			✓		

Area of responsibility	Requirements	Essential or desirable	*Method of assessment			
			A	I	T	D

***A = Application Form; I = Interview; T = Test; D = Documentary Evidence**