Digital Transformation and AI Integration Engineer (KTP Associate)			
School / Department:	School of Architecture, Built Environment, Engineering and Computing	**Grade:**	*£38,000 - £42,000*
New appointees to Birmingham City University will ordinarily be appointed at the entry point of the appropriate grade			
Responsible to:	Academic Lead	**Responsible for:**	N/A

Job Purpose

This position forms part of the Knowledge Transfer Partnership (KTP) programme co-funded by Innovate UK and ECAM Engineering Limited. The Digital Transformation and AI Integration Engineer (KTP Associate) will work on a 36-month collaborative innovation project to develop and integrate a system for ECAM Engineering Limited.

The Project

The project is focused on transforming ECAM Engineering into a UK leader in smart manufacturing through the development of an AI-driven operations and manufacturing platform embracing Industry 4.0 capabilities. The project will integrate machine connectivity, predictive maintenance and AI-powered customer engagement, enabling real time production insight, instant quotations and sustainable growth for the company.

Main Activities and Responsibilities

The successful candidate will lead on the project, working closely with ECAM Engineering senior management and the Knowledge Base team at Birmingham City University. The position is for 36 months. The expected start date is as soon as is practical.

The KTP Associate will work on:

Supporting the delivery of the digital transformation project by analysing current manufacturing and commercial processes, identifying improvement opportunities, and translating operational needs into clear technical requirements. They will help design and implement the target digital architecture, including AI-enabled MES/IoT systems, cloud-based data platforms, databases and system integrations, while ensuring that production, engineering and commercial data can be captured, structured and used effectively across the business.

The role requires the successful candidate to:

Lead practical deployment activities including shop-floor data capture, dashboard development, testing and user adoption, and will support the development of AI-enabled quotation, document parsing, and automated BoM/costing tools. In the later stages, the role will focus on end-to-end integration, validation, documentation, training and handover, ensuring the new systems are robust, scalable and embedded into day-to-day operations.

Person Specification	
Essential Criteria	**Application Form / Support Statement / Interview**
1. A minimum 2:1 Honours degree in Manufacturing Engineering, Mechatronics, Automation, Computer Science, Data Engineering, AI or a closely related discipline	Application Form / Support Statement / Interview
2. Practical experience of manufacturing systems, industrial processes or production environments	Application Form / Support Statement / Interview
3. Experience with system integration, including some combination of MES, ERP/MRP, CRM, APIs, databases or cloud platforms	Application Form / Support Statement / Interview
4. Experience handling structured and unstructured data, including data cleansing, transformation and validation	Application Form / Support Statement / Interview
5. Ability to work across hardware, software and process domains rather than in a narrow specialist silo	Application Form / Support Statement / Interview
6. Strong technical documentation and reporting capability	Application Form / Support Statement / Interview
7. Evidence of delivering technical projects from requirements through to deployment and testing	Application Form / Support Statement / Interview
8. Able to rapidly learn new technologies, including programming languages and digital platforms, and adapt effectively as systems, tools and project requirements evolve	Application Form / Support Statement / Interview
9. Able to engage confidently with both technical and non-technical stakeholders	Application Form / Support Statement / Interview
10. Excellent communication skills to express ideas effectively, orally, graphically and in writing to articulate complicated matters between the academics and the company project team members	Application Form / Support Statement / Interview
11. An ability to work to tight deadlines with diligence, attention to detail, and maintain high standards of work	Application Form / Support Statement / Interview
12. An ability and aptitude to work effectively as part of an interdisciplinary team, and self-management and planning skills to make optimum use of time	Application Form / Support Statement / Interview

13. Strong leadership skills in successfully implementing and embedding new innovations within a company or organisation	
Desirable Criteria	
1. A master's degree or PhD [awarded, recently submitted, or near completion] in Mechatronics, Computer Science, AI or a closely related discipline will be an advantage	Application Form / Support Statement / Interview
2. Experience with industrial IoT, sensor integration, edge-to-cloud architectures or industrial communication protocols	Application Form / Support Statement / Interview
3. Experience with Azure, AWS or comparable cloud environments	Application Form / Support Statement / Interview
4. Knowledge of manufacturing analytics and predictive maintenance	Application Form / Support Statement / Interview
5. Experience building dashboards, workflow automations or data pipelines	Application Form / Support Statement / Interview
6. Exposure to AI/ML, natural language processing, document extraction or rules-based decision engines	Application Form / Support Statement / Interview
7. Experience with quotation systems, cost modelling, BoM structures or engineering commercial workflows	Application Form / Support Statement / Interview
8. Knowledge of security, compliance, backup and disaster recovery in connected production environments	Application Form / Support Statement / Interview
9. Experience of pilot deployments, user acceptance testing and change adoption in operational settings	Application Form / Support Statement / Interview
10. Experience working with academic/industry collaboration, innovation projects or grant funded delivery programmes	Application Form / Support Statement / Interview
11. Academic acumen to enable successful reporting through research publications in academic journals and marketing/training materials	Application Form / Support Statement / Interview
12. Practical experience of working in the manufacturing industry	Application Form / Support Statement / Interview

- Application Form – assessed against the application form. Normally used to evaluate factual evidence e.g. award of a qualification. Will be assessed as part of the shortlisting process.
- Cover Letter & CV - applicants are asked to provide a statement to demonstrate how they meet the criteria, and may reference their CV. The response will be assessed as part of the shortlisting process.
- Interview – assessed during the interview process by either competency-based interview questions, tests, work-related exercise, presentation and discussion, or teaching session etc.