



## Candidate Information

<b>Position:</b>	Senior Engineer (3 posts)
<b>School/Department:</b>	BRC D Momentum 1.0
<b>Reference:</b>	25/112360
<b>Closing Date:</b>	Monday 3 February 2025
<b>Salary:</b>	£41,626 - £62,724 per annum
<b>Anticipated Interview Date:</b>	Thursday 20 February 2025
<b>Duration:</b>	Permanent

### JOB PURPOSE:

To undertake collaborative development projects with industrial partners exploiting research at Momentum One Zero (M1.0), a Queen's University led cross-disciplinary digital innovation hub.

### MAJOR DUTIES:

1. To contribute to the commercialisation and technology transfer of Momentum One Zero's research outputs by contributing to on-going research programmes in collaboration with research-intensive SME's, international corporations, and research institutes.
2. Undertaking significant software development projects and managing research projects and deliverables focused on the use of emerging technologies in AI, cybersecurity or digital twin modelling.
3. Design and development of software components incorporating cutting edge AI, modelling, and/or digital twin related technologies.
4. Design and development of proof-of-concept demonstrators that incorporate newly developed capabilities emerging from Momentum One Zero's research groups.
5. To assist with the raising of substantial funding from industry and major government sources, nationally and internationally.
6. Produce high-quality technical reports and deliverables to enable commercialisation or assist in generating funding opportunities to support further programme activity.
7. Help develop the international reputation of Momentum One Zero through presentations, attendance at tradeshow and visiting major companies and research centres worldwide.
8. Provide mentoring and training to staff/students as appropriate.
9. Carry out routine administrative tasks to ensure project goals are completed on time and within budget.
10. Undertake any other duties that may reasonably be requested by management.

### ESSENTIAL CRITERIA:

1. Honours Degree, or equivalent, in Computer Science, Electrical & Electronic Engineering, or related discipline OR HND in a related discipline with extensive recent and relevant industrial experience.
2. Evidence of industrial product development experience involving software design and development.
3. Software development skills in languages such as C, C++ / Java / Python / R. Use of code configuration management toolsets.
4. Experience in one or more of the following:
  - a. Artificial Intelligence and Machine Learning methodologies and tools.
  - b. Simulation tools and methods relevant to supply chain modelling. (E.g. AnyLogic, SimPy, MATLAB Simulink, and agent-based modelling).
  - c. Real time data collection and processing techniques relevant to supply chain modelling. (E.g. embedded sensor data acquisition and processing, MQTT, CoAP, and other IoT protocols).
  - d. General cyber security principles.
5. High-quality outputs such as demonstrators, prototypes, technical reports, major component design specifications and project deliverables which have successfully passed formal quality review procedures.
6. Ability to communicate complex information clearly in both written and spoken English to a range of stakeholders.

7. Evidence of strong presentation skills and ability to prepare clear and concise presentation materials.
8. Evidence of effective team working skills in a multidisciplinary, cross functional setting.
9. Willingness to visit collaborative partners and to attend meetings and conferences nationally and internationally as requested.

**DESIRABLE CRITERIA:**

1. MEng, MSc or Ph.D. in a relevant area.
2. Experience with data visualisation tools and analytics dashboards.
3. Cloud computing professional certifications (AWS/Azure Cloud Architect, etc).
4. Cyber security professional certifications (CISSP, CEH etc).
5. Experience with agent based software development.