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Candidate Information

Position: Senior/Principal Engineer - AI - based Security
School/Department: Centre for Secure Information Technologies
Reference: 20/108077
Closing Date: Friday 7 February 2020
Salary: £51,150 to £64,591 per annum
Anticipated Interview Date: Monday 9 March 2020
Duration: Until 31 January 2022

JOB PURPOSE:

To provide engineering support to CSIT's security analytics research group.

MAJOR DUTIES:

1. To translate research prototypes into fully architected software security components displaying the quality characteristics necessary for integration into viable commercial products.
2. Provide strong technical leadership to engineers and project teams giving them direction on system design across a broad range of platforms and technologies. For example, data analytics workflows, machine learning frameworks, anomaly detection techniques, operational resilience and situational awareness.
3. Promote quality software development practices across the research and development teams.
4. Ensure reliable delivery of projects via effective planning, monitoring and control.
5. Promote open innovation and drive technical engagement with CSIT Industrial Advisory Board members.
6. Lead the design, development, delivery and maintenance of various CSIT concept demonstrators.
7. Produce high quality technical reports and deliverables to assist in generating funding opportunities to support further innovation activity.
8. Help develop the international reputation of CSIT through presentations, attendance at trade-shows and innovation events worldwide.
9. Undertake any other duties that may reasonably be requested by management.
10. Provide mentoring and training to engineering staff (line reports) as appropriate.

Planning and Organising:

1. Liaise with other team members to achieve coordinated progress against objectives.
2. Plans own work and the work of others to meet given objectives and processes.
3. Engaging and influencing senior stakeholders and advisory board in the progression of activities.

Resource Management Responsibilities:

1. Provide guidance as required to supporting staff assisting with innovation activities.
2. Ensure research and development facilities and resources are used in an effective and efficient manner.
3. Responsibility for work of others and allocation of resources as required.
4. Responsible for line management and on-going development of individuals as outlined by current HR policy.

Internal and External Relationships:

1. Initiate and sustain engagements with team members to facilitate progress against objectives.
2. Participate in external engagements with commercial partners and government agencies related to innovation programmes as required.

ESSENTIAL CRITERIA:

1. 2:1 Honours Degree, or equivalent, in Computer Science, Electrical Engineering, Mathematics, Statistics or related disciplines with high data analytics content.
2. Must have significant R&D or commercial product design experience in software systems incorporating AI techniques or machine intelligence workflows.
3. Excellent software development skills in high-level languages such as C, C++, Java, Python and R. A strong background in the use of code configuration management and continuous integration toolsets.
4. A sustained stream of high quality outputs such as technical reports, major component design specifications and project deliverables which have successfully passed formal quality review procedures. Relevant peer reviewed publications may also be acceptable. (Senior Engineer)
5. Strong technical excellence as evidenced by architecting multiple, major, software products over an extensive career. (Principal Engineer)
6. Successful track record in leading, managing and mentoring a team (Principal Engineer).
7. Strong track record of designing and delivering complex R&D projects (Principal Engineer).
8. Ability to communicate complex information clearly in both written and spoken English.
9. Evidence of strong presentation skills and ability to prepare clear and concise presentation materials.
10. A consummate team player who is open-minded and is prepared to work closely with other members of a large multidisciplinary research and development team.
11. Willingness to attend meetings and conferences nationally and internationally as requested, i.e. must be prepared to travel.

DESIRABLE CRITERIA:
1. MEng, MSc Cybersecurity, or a Ph.D. in a relevant area.
2. Cyber security professional certifications (CISSP, CEH etc.)
3. Experience of working in high technology start-ups.
4. Practical experience of using data analysis work benches and machine learning frameworks.
5. Project management as principal investigator, co-investigator, or work package leader.
6. Previous experience of developing project funding proposals from competitive sources. Commercial sponsorship (for example contract R&D activity) is also relevant.
7. Sufficient breadth and depth of specialist knowledge in the discipline and of research and development methods and techniques to work within established research programmes.
8. Ability to interact constructively with others including senior academic staff and industrial / government collaborators.
9. Stable, hard-working personality with a strong drive to complete projects on time and to deliver the promised outcomes.