Research Fellow/Engineer (in the area of obfuscation
algorithms)
Singapore Institute of Technology

Job Title Research Fellow/Engineer (in the area of obfuscation
algorithms)

Department Infocomm Technology

Institution Singapore Institute of Technology

Singapore, , Singapore

Date Posted Oct. 16, 2024

Application Deadline Open until filled

Position Start Date Available immediately

Job Categories Faculty Associate

Research Scientist/Associate

Academic Field(s) Electrical and/or Electronics

Computer Engineering

Computer Science

Job Website https://careers.singaporetech.edu.sg/cw/en/job/498795/research-
fellowengineer-in-the-area-of-obfuscation-algorithms

Apply By Email

Job Description

Research Fellow/Engineer (in the area of obfuscation algorithms)

Job no: 498795
Department: Infocomm Technology
Contract type: Contract
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As a University of Applied Learning, SIT works closely with industry in our research pursuits. Our research staff will have the opportunity to be equipped with applied research skill sets that are relevant to industry demands while working on research projects in SIT.

The primary responsibility of this role is to deliver on an industry innovation research project where you will be part of the research team to develop/produce/investigate obfuscation algorithms that will take advantage of quantum primitives. The techniques developed will aid in obfuscating quantum programs, quantum-classical hybrid programs and classical programs. Candidate should have good understanding of reverse engineering techniques, assembly language concepts and instructions and python programming. Candidate should have some understanding of quantum computing and cyber security.

Key Responsibilities:

- Participate in and manage the research project with Principal Investigator (PI), Co-PI and the research team members to ensure all project deliverables are met.
- Undertake these responsibilities in the project:
    i. Design quantum obfuscation techniques for data and code obfuscation
    ii. Implement the designed algorithms and integrate into an existing quantum obfuscation platform.

- Carry out Risk Assessment, and ensure compliance with Work, Safety and Health Regulations.
- Coordinate procurement and liaison with vendors/suppliers.
- Work independently, as well as within a team, to ensure proper operation and maintenance of equipment.

Job Requirements:

- Have relevant competence in the areas of programming, reverse engineering and low level languages.
- Have a degree in Computer Science, Computer Engineering, Information Security or Electrical

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Engineering. Possessing a Master's or PhD degree will be advantageous.

Key Competencies

- Able to build and maintain strong working relationships with people within and external to the university.
- Self-directed learner who believes in continuous learning and development.
- Proficient in technical writing and presentation.
- Possess strong analytical and critical thinking skills.
- Show strong initiative and take ownership of work.

Major Challenges:

- Experimental analysis of the performance of quantum obfuscation due to lack of hardware resources.

Apply now
Advertised: 16 Oct 2024 Singapore Standard Time
Applications close: 31 Dec 2024 Singapore Standard Time

Contact Information

Please reference Academickeys in your cover letter when applying for or inquiring about this job announcement.

Contact

Singapore