

**Research Engineer (IoT) - ICDG7**  
**Singapore Institute of Technology**

Direct Link: <https://www.AcademicKeys.com/r?job=231199>

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Posted Feb. 22, 2024, set to expire Jul. 5, 2024

**Job Title** Research Engineer (IoT) - ICDG7  
**Department** Professional Officers  
**Institution** Singapore Institute of Technology  
Singapore, , Singapore

**Date Posted** Feb. 22, 2024

**Application Deadline** Open until filled  
**Position Start Date** Available immediately

**Job Categories** Professional Staff

**Academic Field(s)** Computer Engineering  
Computer Science

**Job Website** <https://careers.singaporetech.edu.sg/cw/en/job/498611/research-engineer-iot-icdg7>

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**Job Description**

## **Research Engineer (IoT) - ICDG7**

**Job no:** 498611

**Department:** Professional Officers

**Contract type:** Contract

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As a University of Applied Learning, SIT works closely with industry in our research pursuits. Our

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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 design and develop an Internet of Things (IoT) system. The goal is to create electronic hardware, microcontroller firmware and mobile application software. The mobile application communicates to microcontroller via Bluetooth-LE connection.

### **Key Responsibilities**

- Participate in and manage the research project with Principal Investigator (PI), Co-PIs, collaborators, and the research team members to conduct research on IoT technology, focusing on the development of IoT hardware, firmware, and software.
- To design and develop IoT prototypes tailored to meet specific project requirements. Preferably experienced in electronic hardware design, microcontroller firmware development, mobile programming using Flutter, and secured two-way encrypted Bluetooth communication protocol.
- Experienced in developing electronic hardware, microcontroller firmware, and mobile application software.
- To collaborate with client's R&D Team, Quality Assurance Team, as well as other stakeholders to ensure the robustness and seamless integration of IoT system performance.
- To conduct thorough testing and troubleshooting to identify and resolve issues that may arise.
- To collaborate with the client and relevant stakeholders to ensure personal data and its security are not compromised.
- To evaluate the risk of security leak of the IoT system.
- To be able to mentor and collaborate with the university undergraduates and junior researchers, providing guidance and support in the research activities.
- To maintain comprehensive documentation of IoT technology research, system designs, and testing procedures.
- To develop technical documentation and manuals for internal and external use.
- Assist in writing grant proposals and securing funding for future research projects.
- 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**

- Degree in Computer Science, Computer Engineering, Electronic Engineering, or a related field.

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- Proven experience in IoT technology research and development.
- Strong programming skills, particularly in languages such as C, C++, Python or Dart.
- In-depth knowledge of Bluetooth standards, protocols, and system architectures.
- Experience with IoT & Bluetooth firmware and software development.
- Familiarity with IoT concepts and applications.
- Knowledge of security considerations in IoT systems.
- Proficient in mobile application development.
- Strong problem-solving and analytical skills, with the ability to critically evaluate and interpret research data.
- Excellent written, verbal and communication skills.
- Ability to work both independently and collaboratively in a research team environment.
- Prior experience in publishing research papers or patents related to IoT technology is 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.

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**Advertised:** 22 Feb 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**

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