

Research Engineer (Using a Sandbox Game for
Introductory Programming in Higher Education) (OD)
Singapore Institute of Technology

Direct Link: <https://www.AcademicKeys.com/r?job=256994>

Downloaded On: Aug. 21, 2025 11:53pm

Posted May 14, 2025, set to expire Sep. 13, 2025

Job Title Research Engineer (Using a Sandbox Game for Introductory
Programming in Higher Education) (OD)

Department SIT Teaching & Learning Academy

Institution Singapore Institute of Technology
Singapore, , Singapore

Date Posted May 14, 2025

Application Deadline Open until filled

Position Start Date Available immediately

Job Categories Faculty Associate

Academic Field(s) Computer Science

Job Website <https://careers.singaporetech.edu.sg/cw/en/job/498930/research-engineer-using-a-sandbox-game-for-introductory-programming-in-higher-education-od>

Apply By Email

Job Description

Research Engineer (Using a Sandbox Game for Introductory Programming in Higher Education) (OD)

Job no: 498930

Department: SIT Teaching & Learning Academy

Contract type: Contract

[Apply now](#)

**Research Engineer (Using a Sandbox Game for
Introductory Programming in Higher Education) (OD)
Singapore Institute of Technology**

Direct Link: <https://www.AcademicKeys.com/r?job=256994>

Downloaded On: Aug. 21, 2025 11:53pm

Posted May 14, 2025, set to expire Sep. 13, 2025

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 Research Engineer will support the implementation of a MOE-funded study investigating the use of a Commercial-Off-The-Shelf (COTS) game, *Space Engineers*, in enhancing programming education through digital game-based learning (DGBL). This role contributes directly to the project's goals by modifying the game to suit educational objectives, developing learning scenarios, supporting data collection and analysis, and disseminating research outcomes to advance technology-enhanced pedagogy in higher education. This is a 2-year funded part-time position (3 days work) (preferred) or a 1-year full-time position. There is a possibility for continued employment to work on other teaching and learning research projects.

Key Responsibilities:

- Design, modify, and test in-game scenarios within *Space Engineers* to align with programming learning objectives.
- Support development of data collection instruments and assessment tools (e.g. pre/post tests, rubrics).
- Assist with setup and technical troubleshooting during intervention phases.
- Conduct and support data collection, including managing code for in-game data capture if applicable.
- Perform quantitative and qualitative data analysis, including performance outcomes metrics and thematic coding of interviews.
- Contribute to the writing of research reports, publications, and presentations.
- Liaise with stakeholders including game developers, educators, and study participants where technical input is needed.
- Maintain project documentation and version control of game modifications and scripts.

Job Requirements:

- Bachelor's degree in Computer Science, Engineering, Software Engineering, Game Development, or a related field.
- 1-3 years of professional experience with software development, preferably with experience in game development or game modification.
- Proficiency in C# and experience with sandbox game environments or similar open-world game platforms.

**Research Engineer (Using a Sandbox Game for
Introductory Programming in Higher Education) (OD)
Singapore Institute of Technology**

Direct Link: <https://www.AcademicKeys.com/r?job=256994>

Downloaded On: Aug. 21, 2025 11:53pm

Posted May 14, 2025, set to expire Sep. 13, 2025

- Demonstrated ability to produce technical documentation.
- Prior experience in educational technology or research projects is advantageous.

Key competencies:

- Strong programming and software engineering skills, especially in C#.
- Excellent problem-solving and debugging skills.
- Ability to efficiently manage time to meet project milestones and deliverables while collaborating with an interdisciplinary team.
- Strong organisational skills to effectively manage data collection processes, multiple tasks, deadlines, and project components.
- Ability to work independently with minimal supervision while being proactive in engaging and collaborating with team members, stakeholders, and external partners.
- Strong communication and documentation skills.

Major Challenges:

- Translating educational objectives into meaningful and engaging in-game learning experiences using a COTS game not originally designed for education.
- Balancing technical development tasks with research needs such as data collection, analysis, and reporting.
- Adapting to iterative changes based on pilot study feedback while maintaining project timelines.
- Ensuring that research study maintain both technical robustness and alignment with the rigor of educational research.

[Apply now](#)

Advertised: 14 May 2025 Singapore Standard Time

Applications close: 30 Sep 2025 Singapore Standard Time

Contact Information

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

Research Engineer (Using a Sandbox Game for
Introductory Programming in Higher Education) (OD)
Singapore Institute of Technology

Direct Link: <https://www.AcademicKeys.com/r?job=256994>

Downloaded On: Aug. 21, 2025 11:53pm

Posted May 14, 2025, set to expire Sep. 13, 2025

Contact

Singapore