Position Description – Research Assistant

Position Details

Position Title:	Research Assistant
College/Portfolio:	STEM College
School/Group:	School of Computing Technologies
Campus Location:	Based at the Melbourne CBD campus, however, may be required to work and/or be based at other campuses of the University.
Classification:	Academic Level A
Employment Type:	1 year
Time Fraction:	1 FTE

RMIT University

RMIT is a multi-sector university of technology, design and enterprise with more than 96,000 students and close to 10,000 staff globally. The University's mission is to help shape the world through research, innovation and engagement, and to create transformative experiences for students to prepare them for life and work.
https://www.rmit.edu.au/about
https://www.universitiesaustralia.edu.au/university/rmit-university/

Our three main campuses in Melbourne are located in the heart of the City, Brunswick and Bundoora. Other locations include Point Cook, Hamilton and Bendigo, two campuses in Vietnam (Hanoi and Ho Chi Minh City) and a centre in Barcelona, Spain. RMIT is a truly global university.
https://www.rmit.edu.au/about/our-locations-and-facilities

We are also committed to redefining our relationship in working with, and supporting, Indigenous self-determination. Our goal is to achieve lasting transformation by maturing our values, culture, policy and structures in a way that embeds reconciliation in everything we do. We are changing our ways of knowing, working and being to support sustainable reconciliation and activate a relationship between Indigenous and non-Indigenous staff, students and community. Our three campuses in Melbourne (City, Brunswick and Bundoora campuses) are located on the unceded lands of the people of the Woi Wurrung and Boon Wurrung language groups of the eastern Kulin Nation.

Why work at RMIT University

Our people make everything at the University possible. We encourage new approaches to work and learning, stimulating change to drive positive impact. Find out more about working at RMIT University, what we stand for and why we are an Employer of Choice.
https://www.rmit.edu.au/careers

We want to attract those who will make a difference. View RMIT's impressive standings in university rankings.
https://www.rmit.edu.au/about/facts-figures/reputation-and-rankings

STEM College

The STEM College holds a leading position and expertise in the science, technology, engineering, mathematics, and health (STEM) fields. We are uniquely positioned to influence and partner with industry, as never before.

STEM College is a community of exceptional STEM researchers, teachers, inventors, designers and game-changers, supported by talented professional staff. We offer higher education programs across all STEM disciplines at the Bachelor, Master and PhD levels, and ensure our students experience an education that is work-aligned and life-changing.

The College is renowned for its exemplary research in many STEM areas including advanced manufacturing and design; computing technologies; health innovation and translational medicine; nano materials and devices; and sustainable systems. Our brilliant researchers attract funding from government and industry sources.

Industry is at the heart of what we do. It ensures our research has real world impact, and our students are truly work-ready. Under the leadership of DVC STEM College & Vice President, Digital Innovation, we have established new hubs of industry-connected digital innovation and endeavour and are engaging with global STEM organisations at scale.

Our diversity and shared values empower our work, and we are proud of the College's inclusive, caring culture. We offer a safe, dynamic work environment, and support every member of our community of achieve their potential. The College appointed Victoria's first ever Dean of STEM, Diversity & Inclusion in 2020, and this role drives gender equity, diversity and inclusion strategies across the College.

STEM College employs 1,000 staff who deliver onshore and offshore programs to approximately 20,000 students.

We are here to positively impact the world and create the next generation of STEM leaders.
www.rmit.edu.au/seh

School of Computing Technologies
The School of Computing Technologies (SCT) provides world class computing research and innovative information technology education. We place a significant emphasis on diversity and interdisciplinarity, and aspire to transform the future of technology through integration of varied perspectives and through our distinctive research.

In the 2024 QS University Rankings by discipline, RMIT University was ranked at 170 globally for Computer Science and Information Systems and 57 in Library and Information Management. Education programs in Computer Science, Software Engineering, Data Science, Artificial Intelligence, Cyber Security and Information Technology are offered in the School of Computing Technologies, one of Australia's largest and leading educational facilities in the field.

We are a national leader in industry-connected learning in computing, data science, and IT. We have recently redesigned our undergraduate programs to provide a common foundation in programming for all SCT undergraduates. Our approach is centred on an innovative Bootcamp2Studio model that makes use of immersive and challenge-based pedagogy to drive higher-level learning. We provide students with

practical learning experiences that will prepare them to contribute meaningfully to our world through their work.

The School is led by the Dean, School of Computing Technologies, and has three disciplines:

- Cyber Security & Software Systems (CSSS)
- Data Science & Artificial Intelligence (DSAI)
- Interaction, Technology & Information (ITI)

Our PhD students and faculty conduct world leading research in many areas of Computing and Computing applications, including in:

- Information Interaction and Information Retrieval
- Human-Computer Interaction
- Artificial Intelligence and Natural Language Processing
- Data Science and Machine Learning
- Recommendation and Big Data Analysis
- Cybersecurity
- Software Engineering
- Digital Health
- Computer Science Education

For more information about our School, it's discipline structure and teaching and research focus areas please visit our website.

Position Summary

The Research Assistant (RA) role is to be employed as part of the awarded CRC-P grant. The RA takes the major responsibility to design, implement, and test the newly designed anomaly detection for sophisticated attacks in large-scale systems and networks. The candidate needs to have a strong background in ML programming, particularly large-scale models, and working with LLM. Familiarity with system security and anomaly detection is desirable.

Reporting Line

Reports to:

Professor Zahir Tari
School of Computing Technologies
Research Director of the RMIT Centre of Cyber Security Research and Innovation (CCSRI)

Organisational Accountabilities

RMIT University is committed to the health, safety and wellbeing of its staff. RMIT and its staff must comply with a range of statutory requirements, including equal opportunity, occupational health and safety, privacy and trade practice. RMIT also expects staff to comply with its policy and procedures, which relate to statutory requirements and our ways of working.

RMIT is committed to providing a safe environment for children and young people in our community. Read about our commitment and child safe practices. https://www.rmit.edu.au/about/our-locations-and-facilities/facilities/safety-security/child-safety.

Appointees are accountable for completing training on these matters and ensuring their knowledge and the knowledge of their staff is up to date.

Key Accountabilities

- Design, implement, and evaluate advanced ML models for detecting sophisticated attacks in large-scale computer systems and networks, with a focus on scalability, robustness, and applicability to real-world threat environments.

- Implement Scalable Solutions -- Build and optimize scalable ML pipelines suitable for large datasets and high-throughput system environments.

- Evaluate Model Performance -- Design and run experiments to benchmark model performance across various datasets and models, with a focus on detection accuracy, robustness, and scalability.

- Conduct high quality research individually or as part of a team including: managing R&D projects within timelines and budget and ensuring compliance with quality and reporting requirements as required; publishing research results in high quality outlets as required; assisting with grant writing as required; mentoring and/or supervising higher degree by research candidates as required; actively engaging with clients and external stakeholders as required.

- Actively contribute to the development of the CRC-P project and engagement strategy within the research team, ensuring it aligns with the strategy of the School, the STEM College, and the University.

- Participate in College's governance activities as requested and undertake administrative duties, including engagement activity within RMIT.

Key Selection Criteria

1. Demonstrated expertise in ML, with significant experience in designing and implementing large-scale models, including large language models (LLMs). Proven application of ML techniques to system security, particularly in the context of complex computer systems or networks, is highly desirable.
2. Extensive experience in the design, implementation, and testing of large-scale computing systems, with a strong focus on scalability, performance, and robustness in real-world or research-driven environments.
3. A strong work ethic, and the ability to work well independently, and as a member of a broader team, including with industrial partners
4. Excellent interpersonal and communications skills appropriate for interacting with higher degree by research candidates, staff and industry, together with a strong commitment to teamwork and multidisciplinary collaboration.

Qualifications

A Master or Honours degree in Computer Science related field is required.

Note: Appointment to this position is subject to passing a Working with Children Check and other checks as required by the specific role. Maintaining a valid Working With Children Check is a condition of employment at RMIT.

Endorsed:	Signature:	**Approved:**	Signature:
	Name:		Name:
	Title:		Title:
	Date:		Date: