Position Description – Research Fellow

Position Details

Position Title: Research Fellow – Industrial Decision Support Systems

Position Number:

College/Portfolio: STEM College

School/Group: School of Engineering

Campus Location: Based at the City campus, but may be required to work and/or be based at other campuses of the University.

Classification: Academic Level B

Employment Type: Fixed Term

Time Fraction: 1.0

RMIT University

RMIT is a leading multi-sector university of technology, design and enterprise with more than 91,000 students and 11,000 staff globally. We offer postgraduate, undergraduate, vocational education and online programs to provide students with a variety of work-relevant pathways.

Our purpose is to offer life-changing experiences for our students, and to help shape the world with research, innovation, teaching and industry engagement. With strong industry connections forged over 130 years, collaboration with industry remains integral to RMIT's leadership in education, applied and innovative research, and to the development of highly skilled, globally-focused graduates.

With three campuses in Melbourne (Central Business District, Brunswick and Bundoora), two in Vietnam (Hanoi and Ho Chi Minh City) and a centre in Barcelona, Spain, RMIT is a truly global university. RMIT also offers programs through partners in Singapore, Hong Kong, mainland China, Indonesia, Sri Lanka, Belgium, Germany, Austria and The Netherlands, and enjoys research and industry partnerships on every continent.

We are also committed to redefining our relationship in working with and supporting Aboriginal 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

We're proud to share with you:

- The launch of our second **Reconciliation Plan for Dhumbah Goorowa– a "commitment to share" - an important step in our reconciliation journey.**
- RMIT University is an **Athena SWAN** member with Bronze Award accreditation and the College of Science, Engineering and Health is central to driving improvements in gender equality, diversity and inclusion, particularly in the Science, Technology, Engineering, Mathematics and Medicine (STEM) disciplines.
- RMIT was placed **10th in the 2019 Randstad Employer Brand Research Awards**, up five spots from 2018.
- We were named as an **Employer of Choice for Gender Equality** by the Workplace Gender Equality Agency three years in a row!
- We achieved **Gold Employer status for LGBTIQ** inclusion in the Australian Workplace Equality Index (AWEI) in 2018, 2019 and 2020.
- We were recognised as a **top five employer in 2018 for workplace accessibility** by the Australian Network on Disability, and awarded with **Disability Confident Recruiter Accreditation** in 2020.
- In 2020, RMIT University has become the first Australian institution to receive the **HR Excellence in Research Award,** recognized by the European Commission.

RMIT Standings in university rankings

We are ranked **#1 in the world** for our efforts to reduce inequality in the Times Higher Education (THE) Impact Rankings 2020.

RMIT has a deep commitment to innovation, research and teaching, we are a 5-Star university under the QS Stars international evaluation system and are **223rd globally in QS World University Rankings 2021** (moved up 15 places compared to 238th last year), being also 18th in the world among universities less than 50 years old (2014 QS Top 50 Under 50 index). Additionally:

- In the 2020 QS World University Rankings by Subject, RMIT was positioned 11th in the world (highest ranked in Australia) in Art and Design, 22nd in the world (fourth highest in Australia) in Architecture and the Built Environment, and 37th in Media and Communications. We are also among the world's top 100 universities in Engineering (Civil and Structural; Electrical and Electronic; and Mechanical, Mechanical, Aeronautical and Manufacturing); Accounting and Finance; and Business and Management Studies).

- In the 2020 QS Rankings by Subject, RMIT was ranked 11th in the world and number one in the Asia Pacific for Art and Design, and 26th in Architecture and the Built Environment. RMIT is also among the world's top 100 universities in Engineering (Civil and Structural; Electrical and Electronic; and Computer Science and Information Systems); Accounting and Finance; Business and Management Studies; and Communication and Media Studies. The 2018 Shanghai Ranking's Global Ranking of Academic Subjects highlighted RMIT's strength in Engineering and Technology in particular.

- In the specialised rankings, RMIT is ranked 77th in the QS Graduate Employability Rankings 2020 and 82nd in the inaugural Times Higher Education University Impact Rankings 2019.

- RMIT has moved up 51 places in the 2021 Times Higher Education World University Rankings, strengthening its reputation as a leading global university. The University has leapt more than 150 places since 2015 and is now ranked in the **top 301-350 band**.

- RMIT continued its strong performance in the 2020 CWTS Leiden Ranking, which ranks the world's top research-intensive universities, moving up 21 places to be ranked **293rd globally** on proportion of international publications, and **ranking 225th** on proportion of top 5% publications, up 120 places from 2019.

For more information, visit www.rmit.edu.au/about

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 Engineering

The School of Engineering comprises a diverse range of disciplines: Aerospace Engineering & Aviation; Chemical & Environmental Engineering; Civil & Infrastructure Engineering; Electrical & Electronic Engineering, Biomedical Engineering; Manufacturing, Materials & Mechatronic Engineering; Mechanical & Automotive Engineering.

As a top 100 university in the world for engineering (2015 QS Rankings by Faculty; Engineering and Technology), RMIT Engineering provides students with work-relevant education programs, access to excellent research facilities and opportunities to engage in creative real-world project work through robust relations with local and international industry leaders.

RMIT Engineering's education is based on innovation and creativity. Key discipline areas in the School of Engineering provide programs with flexible pathways to global careers or postgraduate research.

Details relating to the School/College Office may be found on at: www.rmit.edu.au/seh

Position Summary

The Research Fellow will work with research teams and partnerships in the School and Research Centres. The Research Fellow is required to undertake research activities in line with the University's research strategy. The position will carry out independent and/or team research which has a significant impact in the area of their specialisation and be acknowledged at a national level as being influential in expanding the knowledge of their relevant discipline.

The Research Fellow's role is primarily to plan, develop and engage in high quality research projects that are aligned with the University's research focus areas. The Research Fellow will embed their research expertise into the life of the School through the development of high-quality, productivity-driven research networks across RMIT and with local and national, internal and external partners. The Research Fellow will be expected to engage in high quality research projects, to achieve success in attracting research funding and to produce high quality outputs.

Reporting Line

Reports to: Distinguished Professor Xinghuo Yu

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.

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

1. Undertake research and development activities in industrial decision support systems and applications.
2. Design, implement, test and evaluate AI algorithms and software solutions for industrial decision support applications.
3. Prepare research grant applications, particularly targeting Category 1 grant outcomes.
4. Prepare high profile research publications in top journals and conferences as lead or co-author.
5. Developing proof of concept ready for commercialisation.
6. Develop collaborations with national and international researchers, particularly focussing on linkages in the areas related to energy and manufacturing.
7. Co-supervision of postgraduate by research students.
8. Contribute to the successful project management of the research by completing assigned work at the required level and within agreed timeframes.
9. Communicate research outcomes through high quality papers/journal articles, delivery of seminars and conference attendance.
10. Participate in annual work planning and performance management processes.
11. Perform other duties that may be required for the efficient operation of the research team.

Key Selection Criteria

1. Demonstrated research track record in one or more research areas in industrial decision support systems, knowledge-based systems, large language models (LLMs), intelligent learning and control systems, generative artificial intelligence and engineering applications.
2. Demonstrated proficiency in Python programming, with strong hands-on experience in AI algorithm implementation, software development, testing, and debugging.
3. Experience with edge computing, industrial hardware, embedded computing platforms, sensors, or industrial communication and control systems.
4. Publications in top-tier conferences and journals relevant to the above fields.
5. Demonstrate ability to clearly communicate research results, concepts and knowledge.
6. Demonstrated initiative in research and problem solving.
7. Demonstrated ability to work effectively both as a member of a research team and independently when required, to meet project outcomes and milestones.

Qualifications

Mandatory: PhD in computer science/computer engineering, electrical and electronic engineering, and manufacturing engineering or a closely related discipline. Experiences in industrial decision support systems and applications would be preferred, especially in agentic AI technologies including LLM-based agents and machine learning systems.

Appointment to this position is subject to passing a Working with Children check

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