School of Computing and Information Systems
Faculty of Engineering and Information Technology

Junior Software Developer

POSITION NO 0060163
CLASSIFICATION UOM 4
SALARY $73,943 - $78,476 p.a. (pro rata for part-time)
SUPERANNUATION Employer contribution of 17%
WORKING HOURS Full-time
BASIS OF EMPLOYMENT Fixed-term for 18 months

Applications for part-time or other flexible working arrangements will be welcomed and will be fully considered subject to meeting the inherent requirements of the position

OTHER BENEFITS https://about.unimelb.edu.au/careers/staff-benefits
HOW TO APPLY Online applications are preferred. Go to http://about.unimelb.edu.au/careers, select the relevant option ('Current Opportunities' or 'Jobs available to current staff'), then find the position by title or number.

CONTACT FOR ENQUIRIES ONLY
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Please do not send your application to this contact

For information about working for the University of Melbourne, visit our website: about.unimelb.edu.au/careers
Acknowledgement of Country

The University of Melbourne acknowledges the Traditional Owners of country throughout Australia. The University recognises the unique place held by Aboriginal and Torres Strait Islander peoples as the original custodians of country and their continued connection to the land, waterways, songlines and culture. The University respects all Aboriginal and Torres Strait Islander People and warmly embrace those students, staff, Elders and collaborators who identify as First Nations.

Commitment to Diversity and Inclusion

The Faculty of Engineering and Information Technology (FEIT) is committed to creating a diverse and inclusive environment that welcomes and values all people. We recognise that diversity is essential in contributing to the success of FEIT. Women, Aboriginal and Torres Strait Islanders, the LGBTIQ+ community, people living with disability and those from a culturally and linguistically diverse background, are strongly encouraged to apply.
**Position Summary**

The Software Developer will be a key contributor to the development of a healthcare application focused on real-time monitoring of agitation levels in dementia patients. This initiative is part of the Music Attuned Technology - Care via eHealth (MATCH) project, aimed at leveraging wearable technologies to enhance patient care in mental health settings.

The role involves creating a user-friendly application that enables caregivers and nurses to monitor diverse agitation levels and facilitate timely interventions. By implementing proprietary algorithms on wearable sensors, the application should provide real-time insights from agitation patterns. Utilizing deep learning frameworks such as TensorFlow Lite, the application will feature on-device machine learning models, thereby ensuring data privacy and security.

The successful candidate will join a multidisciplinary team of researchers in machine learning, music therapy, electrical and electronic engineering, psychiatry and neuroscience, and software developers. They will contribute to the design and construction of a robust, high-performance application that meets rigorous quality standards. This role will also involve close collaboration with the project team to integrate the application with existing systems and databases, providing end-users with seamless access to real-time insights. The position reports to Professor Lars Kulik and the Lead Researcher for AI at MATCH.

### 1. Selection Criteria

**1.1 ESSENTIAL**

- Bachelor's Degree in Computer Science, Software Engineering, or a related field. A higher degree or professional certification is an advantage.
- Experience in developing robust, scalable, and user-friendly applications.
- Demonstrated proficiency in Front-End Development, including popular frameworks such as React, Angular, or Vue.js.
- Competency in integrating wearable technology and sensor algorithms for real-time data processing.
- Skills and experience with machine learning frameworks like TensorFlow Lite for on-device learning.
- Strong collaboration and communication skills, with the ability to work effectively within cross-functional teams.

**1.2 DESIRABLE**

- Familiarity with data privacy and security standards in healthcare settings.
- Experience in healthcare technology or enthusiasm for developing skills in this area.
- Familiarity with data pipeline integration and real-time data analysis.
- Professional experience in a software development team.
2. **Special Requirements**

- None.

3. **Key Responsibilities**

- Collaborate with a team of researchers, engineers, and healthcare professionals to design and develop an application with a user-friendly interface tailored for nurses and elderly carers, focusing on accessibility and intuitive navigation.
- Implement proprietary algorithms on wearable sensors for real-time insights.
- Leverage a deep learning framework for on-device learning models, ensuring data privacy and security.
- Work closely with data engineers to ensure seamless integration between the application and the underlying data pipelines, facilitating accurate real-time data analysis.
- Comply with healthcare regulations and standards, particularly those related to data privacy and security.

4. **Job Complexity, Skills, Knowledge**

4.1 **LEVEL OF SUPERVISION / INDEPENDENCE**

The Software Developer will report to the Lead Researcher for AI and Healthcare at MATCH and will collaborate with a multidisciplinary team. The developer will be expected to work towards specified tasks with set deadlines in a collaborative manner.

4.2 **PROBLEM SOLVING AND JUDGEMENT**

The Software Developer is expected to have excellent problem-solving skills and make informed judgments on software design and real-time data processing, while adhering to healthcare regulations.

4.3 **PROFESSIONAL AND ORGANISATIONAL KNOWLEDGE**

The Software Developer should have a detailed understanding of modern software engineering principles and should be aligned with the overall goals and objectives of the MATCH project.

4.4 **RESOURCE MANAGEMENT**

The Software Developer will demonstrate good time management skills and be expected to produce results according to set deadlines. The developer will be expected to estimate the resources needed for various development tasks and provide input into project management decisions.
4.5 Breadth of the Position

The position focuses on the development of healthcare technology with a strong emphasis on real-time data processing and machine learning. Domain-specific knowledge in healthcare technology is desirable.

5. Equal Opportunity, Diversity and Inclusion

The University is an equal opportunity employer and is committed to providing a workplace free from all forms of unlawful discrimination, harassment, bullying, vilification and victimisation. The University makes decisions on employment, promotion, and reward on the basis of merit.

The University is committed to all aspects of equal opportunity, diversity and inclusion in the workplace and to providing all staff, students, contractors, honorary appointees, volunteers and visitors with a safe, respectful and rewarding environment free from all forms of unlawful discrimination, harassment, vilification and victimisation. This commitment is set out in the Advancing Melbourne strategy that addresses diversity and inclusion, equal employment opportunity, discrimination, sexual harassment, bullying and appropriate workplace behaviour. All staff are required to comply with all University policies.

The University values diversity because we recognise that the differences in our people’s age, race, ethnicity, culture, gender, nationality, sexual orientation, physical ability and background bring richness to our work environment. Consequently, the People Strategy sets out the strategic aim to drive diversity and inclusion across the University to create an environment where the compounding benefits of a diverse workforce are recognised as vital in our continuous desire to strive for excellence and reach the targets of Advancing Melbourne.

6. Occupational Health and Safety (OHS)

All staff are required to take reasonable care for their own health and safety and that of other personnel who may be affected by their conduct.

OHS responsibilities applicable to positions are published at:
https://safety.unimelb.edu.au/people/community/responsibilities-of-personnel

These include general staff responsibilities and those additional responsibilities that apply for Managers and Supervisors and other Personnel.

7. Other Information

7.1 The School of Computing & Information Systems

The School of Computing & Information Systems (CIS) undertakes research and teaching across a range of information technology disciplines including Software Engineering, Information Systems, and Computer Science. CIS is the most highly ranked School of Computing and Information Systems in Australia according to all major rankings (THE, QS, ARWU). It offers a comprehensive range of IT and IS courses at all levels, including offerings in science, engineering, and business, and is at the forefront of computing research in Australia.
and internationally with close links to major computing research initiatives, including Melbourne Bioinformatics, CSL, The Cremorne Digital Hub and CSIRO’s DATA61.

The School’s aim is to attract and retain outstanding staff available in order to maintain its lead in research and teaching. We have an existing highly successful research team in the area of the appointment, a large number of PhD students, and a substantial cohort of graduate students in our coursework Masters programs.

To find out more about CIS, visit: http://www.cis.unimelb.edu.au/

7.2 FACULTY OF ENGINEERING AND INFORMATION TECHNOLOGY

The Faculty of Engineering and Information Technology (FEIT) has been the leading Australian provider of engineering and IT education and research for over 150 years. We are a multidisciplinary School organised into three key areas; Computing and Information Systems (CIS), Chemical and Biomedical Engineering (CBE) and Electrical, Mechanical and Infrastructure Engineering (EMI). FEIT continues to attract top staff and students with a global reputation and has a commitment to knowledge for the betterment of society.

FEIT has never been better positioned as a global leader, anchored in the dynamic Asia Pacific region, creating and curating knowledge to address some of the world’s biggest challenges. Through our students and our relationships with communities, we can not only respond to society’s needs but anticipate and create engineering and IT solutions for the future.

https://eng.unimelb.edu.au/
https://eng.unimelb.edu.au/about/join-feit

Our ten-year strategy, FEIT 2025, is our School’s commitment to bring to life the University-wide strategy Advancing Melbourne and reinforce the University of Melbourne’s position as one of the best in the world.

To achieve our ambitions, we will continue to build new infrastructure to enable our teaching, research and engagement; we continue to recruit outstanding people from around the world; and we continue to attract high-quality students from across the globe who are at the heart of our enterprise.

https://eng.unimelb.edu.au/about/feit-2025

7.3 THE UNIVERSITY OF MELBOURNE

Established in 1853, the University of Melbourne is a leading international university with a tradition of excellence in teaching and research. The main campus in Parkville is recognised as the hub of Australia’s premier knowledge precinct comprising eight hospitals, many leading research institutes and a wide-range of knowledge-based industries. With outstanding performance in international rankings, the University is at the forefront of higher education in the Asia-Pacific region and the world.

The University employs people of outstanding calibre and offers a unique environment where staff are valued and rewarded.

Further information about working at The University of Melbourne is available at http://about.unimelb.edu.au/careers

7.4 ADVANCING MELBOURNE

The University’s strategic direction is grounded in its purpose. While its expression may change, our purpose is enduring: to benefit society through the transformative impact of education and
research. Together, the vision and purpose inform the focus and scale of our aspirations for the coming decade.

Advancing Melbourne reflects the University’s commitment to its people, its place, and its partners. Our aspiration for 2030 is to be known as a world-leading and globally connected Australian university, with our students at the heart of everything we do.

- We will offer students a distinctive and outstanding education and experience, preparing them for success as leaders, change agents and global citizens.
- We will be recognised locally and globally for our leadership on matters of national and global importance, through outstanding research and scholarship and a commitment to collaboration.
- We will be empowered by our sense of place and connections with communities. We will take opportunities to advance both the University and the City of Melbourne in close collaboration and synergy.
- We will deliver this through building a brilliant, diverse and vibrant University community, with strong connections to those we serve.

The means for achieving these goals include the development of the University of Melbourne’s academic and professional staff and the capabilities needed to support a modern, world-class university. Those means require a commitment to ongoing financial sustainability and an ambitious infrastructure program which will reshape the campus and our contribution to the communities we engage with. This strategy, and the priorities proposed, is centred around five intersecting themes; place, community, education, discovery and global.

### 7.5 GOVERNANCE

The Vice Chancellor is the Chief Executive Officer of the University and responsible to Council for the good management of the University.

Comprehensive information about the University of Melbourne and its governance structure is available at [https://about.unimelb.edu.au/strategy/governance](https://about.unimelb.edu.au/strategy/governance)