RESEARCH ASSISTANT

DEPARTMENT/UNIT	Computer Human Interaction and Creativity (CHIC) / SensiLab
FACULTY/DIVISION	Faculty of Information Technology
CLASSIFICATION	Level A
WORK LOCATION	Clayton campus

ORGANISATIONAL CONTEXT

Everyone needs a platform to launch a satisfying career. At Monash, we give you the space and support to take your career in all kinds of exciting new directions. You'll have access to quality research, infrastructure and learning facilities, opportunities to collaborate internationally, as well as the grants you'll need to publish your work. We're a university full of energetic and enthusiastic minds, driven to challenge what's expected, expand what we know, and learn from other inspiring, empowering thinkers. Discover more at www.monash.edu.

The **Faculty of Information Technology** aims to lead global IT research and education. Our strong reputation and international profile attracts the best students worldwide and we offer a range of accredited courses that transform our graduates into highly skilled and sought after IT professionals, equipped to work globally. Our research is multi-disciplinary, multi-campus and multi-national, giving us a unique capacity to reach out further and deeper than any other institution in Australia. Our research priorities are both technically ambitious and embedded in everyday life. To learn more about the Faculty and the exciting work we do, please visit www.infotech.monash.edu.au.

SensiLab is a multi-disciplinary, bespoke research facility dedicated to the future of creative technology, based at Monash's Caulfield Campus. Jointly supported by the Faculties of Information Technology and Art Design and Architecture (MADA), our work explores the untapped potential of technology, its impacts on society and the possibilities it presents.

SensiLab's dedicated research space encourages enthusiasm, curiosity, seamless collaboration and unrestricted experimentation. It covers a 500m^2 space that includes state-of-the-art facilities in visualisation, digital fabrication, robotics, electronics design and prototyping, digital cinematography, motion capture, sound and digital music production. The open, democratic nature of the research environment encourages close collaboration, knowledge sharing and co-development, creating a unique "hothouse" environment for collaborative, interdisciplinary research. SensiLab has four main research themes:
- Media Futures
- Creative AI
- Sensory, Interactive Space
- Programmable Matter

For more details please see our website: https://sensilab.monash.edu.

POSITION PURPOSE

A Level A research-only academic is expected to contribute towards the research effort of the university and to develop their research expertise through the pursuit of defined projects relevant to the particular field of research.

This position is required to provide research support for the SensiLab Creative AI research team and partners in the application of new Artificial Intelligence technologies to creative projects. The role engages in advancing emerging technologies in machine learning applied to creative applications.

Reporting Line: The position reports to SensiLab Director under broad direction

Supervisory Responsibilities: Not applicable

Financial Delegation: Not applicable

Budget Responsibilities: Not applicable

KEY RESPONSIBILITIES

Specific duties required of a Level A research-only academic may include:

1. The conduct of research under limited supervision either as a member of a team or, where appropriate, independently and the production or contribution to the production of conference and journal paper publications from that research

2. Involvement in professional activities including, subject to availability of funds, attendance at conferences and seminars in the field of expertise

3. Limited administrative functions primarily connected with the area of research of the academic

4. Development of a limited amount of research-related material for teaching or other purposes with appropriate guidance from other staff

5. Occasional contributions to teaching in relation to their research project(s)

6. Experimental design and operation of advanced laboratory and technical equipment or conduct of advanced research procedures

7. Attendance at meetings associated with research or the work of the organisational unit to which the research is connected and/or at departmental, school and/or faculty meetings and/or membership of a limited number of committees

8. Advice within the field of the staff member's research to postgraduate students

KEY SELECTION CRITERIA

Education/Qualifications

1. The appointee will have:

    - An honours degree in Machine Learning, Artificial Intelligence or Computational Creativity or have equivalent qualifications or research experience; or
    - an honours degree or higher qualifications in Machine Learning, Artificial Intelligence or Computational Creativity and/or progress towards a doctorate in the relevant discipline; or
    - doctoral qualifications in Machine Learning, Artificial Intelligence, Computational Creativity or a closely related field

Knowledge and Skills

2. Demonstrated analytical and academic manuscript preparation skills

3. Ability to solve complex problems by using discretion, innovation and the exercise diagnostic skills and/or expertise

4. Well-developed planning and organisational skills, with the ability to prioritise multiple tasks and set and meet deadlines

5. Excellent written communication and verbal communication skills with proven ability to produce clear, succinct reports and documents

6. A demonstrated awareness of the principles of confidentiality, privacy and information handling

7. A demonstrated capacity to work in a collegiate manner with other staff in the workplace

8. Demonstrated computer literacy and proficiency in the production of advanced research using AI and ML technology software, with the capability and willingness to learn new techniques as appropriate, including LSTM RNNs, CNNs, GANs, TCNs, Novelty Search and Evolutionary Strategies

9. Development experience with major deep learning technologies and frameworks, such as Tensorflow, Caffe, Pytorch, mxnet, Theano and Torch

10. Demonstrated experience with software development in Python or C++, and on GPU hardware

11. Proven experience in the application of AI technologies to co-creation of creative systems

12. An understanding of aesthetic, creative and cultural issues involved in applying machine learning to creative practices

OTHER JOB RELATED INFORMATION

- Travel to other campuses of the University may be required
- There may be a requirement to work additional hours from time to time
- There may be peak periods of work during which taking of leave may be restricted

LEGAL COMPLIANCE

Ensure you are aware of and adhere to legislation and University policy relevant to the duties undertaken, including: Equal Employment Opportunity, supporting equity and fairness; Occupational Health and Safety, supporting a safe workplace; Conflict of Interest (including Conflict of Interest in Research); Paid Outside Work; Privacy; Research Conduct; and Staff/Student Relationships.