

Position Description – Research Associate in Computer Vision

Updated 20 September 2024

POSITION DETAILS	
College	College of Science and Engineering
Organisational Unit	Electrical, Electronic and Robotic Engineering
Supervisor	Associate Professor
Classification	Research (Academic) Level A
Employment Type	Fixed-term 2.5 years, full-time

POSITION SUMMARY
<p>The Research Associate will undertake research in Computer Vision under the direction of Associate Professor Brinkworth, and in conjunction with the research team, the incumbent will assist in the design and execution of the research project performing tasks such as:</p> <ul style="list-style-type: none"> - Develop and optimise existing models of insect-inspired sensor processing - Develop and implement target detection techniques for complex lighting conditions - Software coding of embedded computing hardware for real time signal processing operations - Integrate infrared and visual imaging technology/techniques - Incorporate modern machine learning techniques for object classification in images - Examine and compare the new technology's potential with existing detection techniques - Assist in the design and execution of field trials - Analyse data from field trials - Preparation of manuscripts for publication <p>The incumbent may assist in leading students involved in the research Project, according to the University's policies, practices and standards.</p>

UNIVERSITY EXPECTATIONS AND VALUES
<p>All staff at Flinders are responsible for understanding their obligations and responsibilities as set out in the University's code of conduct and are expected to:</p> <ul style="list-style-type: none"> • demonstrate commitment to the University's values of Integrity, Courage, Innovation, Excellence and the underlying ethos of being Student Centred; • contribute to the efficient and effective functioning of the team or work unit in order to meet the University's objectives. This includes demonstrating appropriate and professional workplace behaviours, providing assistance to team members if required and undertaking other key responsibilities or activities as directed by one's supervisor; • promote and support an inclusive workplace culture which values diversity and embraces the principles of equal opportunity; • perform their responsibilities in a manner which reflects and responds to continuous improvement; and

- familiarise themselves and comply with the University's Work Health and Safety, Injury Management and Equal Opportunity policies.

A National Police Certificate which is satisfactory to the University will be required by Flinders University before the successful applicant can commence in this position.

An up to date COVID-19 vaccination may be required as a condition of employment, in accordance with the Flinders University [COVID-19 Vaccination Policy \(2022\)](#). If required, any offer of employment will be subject to the successful candidate presenting their COVID-19 Digital Certificate as evidence of vaccination or showing evidence of a valid medical exemption, where relevant.

KEY POSITION RESPONSIBILITIES

The Research Associate in Computer Vision is accountable for:

- Assisting in conducting research into the field of signal and sensor processing and complex target detection by collaborating with Associate Professor Russell Brinkworth and the Project Research Team to successfully deliver project milestones and Key Performance Indicators.
- Contribute to the planning and execution of research by offering new ideas, reviewing relevant literature and other sources of information, actively participating in the production of data and attending seminars, meetings and conferences.
- Contributing to the coordinating, planning and executing the project tasks required to collaborate with industry partners.
- Contributing to ethical, high quality and innovative research and evaluation through activities such as scholarship, quality publication, external grant acquisition and presentations that aligns with the College areas of research strength and focus.
- Assisting principal supervisors with supervision of postgraduate students.
- Establishing and maintaining collaborations within the University, and at State, national and international levels in order to improve research outputs, patents and publications.
- Some out of hours work (including weekends) as well as rural SA, interstate and overseas travel, may be required.
- Any other responsibilities in line with the level of the position as assigned by the Supervisor and/or the University.

KEY POSITION CAPABILITIES

- Completion of a PhD in Electrical & Electronic or Robotic Engineering or Computer Science or significant progress towards completion of a PhD in Electrical & Electronic or Robotic Engineering or Computer Science or a related field.
- Demonstrated emerging research experience in terms of publications and presentations at a national and/or international level in a relevant field.
- Demonstrated experience in qualitative research methodology.
- Demonstrated ability to deliver project targets on time.
- Demonstrated well-developed interpersonal skills and the capacity to collaborate and engage with diverse stakeholders and industry partners.
- Demonstrated ability to critically review the literature in relevant fields.

- Demonstrated ability to undertake collaborative research and establish and maintain effective relationships with staff and industry.
- Demonstrated excellent oral and written communication skills in an academic environment.

FEMINAL