



UNIVERSITY OF
NEWCASTLE

CENTRE FOR APPLIED AND RESPONSIBLE AI (CARA)

Transforming Industries Through Responsible AI Innovation

The Centre for Applied and Responsible AI (CARA) is a multidisciplinary research hub advancing both foundational and applied AI to solve real-world industry challenges. The team pioneers novel machine-learning solutions for forecasting, trait discovery, and quality prediction, while developing cutting-edge computer-vision and imaging methods from hyperspectral and 3D pipelines to pattern-recognition algorithms.

PARTNERSHIP CAPABILITIES

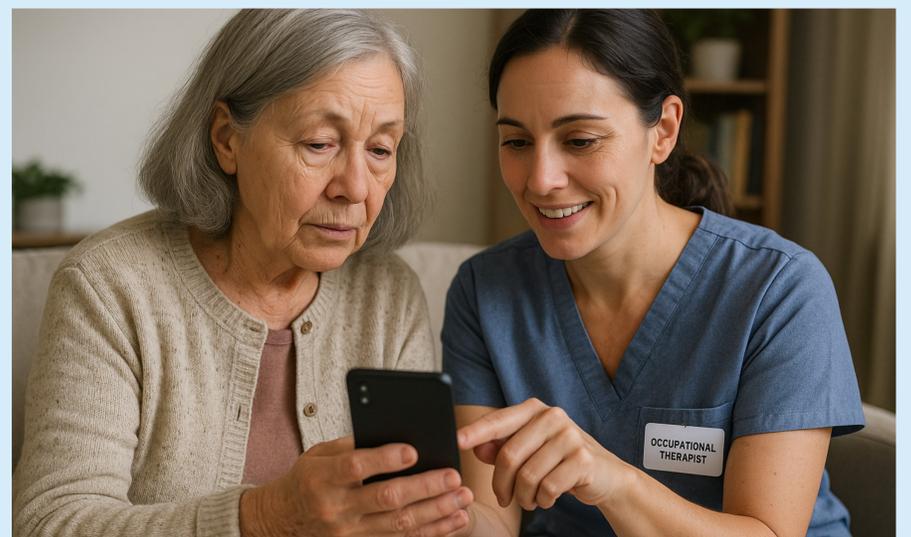
- Advanced AI and machine learning solutions
- Computer vision and robotics innovation
- Privacy-preserving data frameworks
- Human-centred design and evaluation
- Blockchain-enabled data security
- Industry-focused R&D partnerships
- Customised training and capability building
- Ethical AI governance and validation

PROVEN IMPACT

- Over 100 peer-reviewed publications in machine learning research
- Multiple international patents licensed to NASA, DSTO, and US Army
- \$8+ million in competitive grants from national and international agencies
- Successful deployment of AI solutions across healthcare, manufacturing, and agriculture
- Development of privacy-preserving frameworks for sensitive data
- Implementation of precision automation solutions in defence and manufacturing
- Creation of scalable data architectures for health and agrifood applications

REVOLUTIONISING AGED CARE THROUGH AI INNOVATION

CARA collaborated with industry partners to evaluate an AI-powered mobile app that transforms care planning for older Australians receiving support at home. The solution enables care partners to create high-quality care plans using voice or text input, completing documentation in under 15 minutes. This innovation demonstrates CARA's ability to collaborate on responsible AI solutions that improve efficiency while maintaining privacy and person-centred care principles. The successful implementation showed strong user support and highlighted the potential for AI to enhance aged care service delivery.



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