CSIRO Next Generation Graduates Program (NGGP) Scholarship

The CSIRO Next Generation Graduates Program (NGGP) Scholarship has been established to support exceptional students engaged in advanced research in computer vision.

10 scholarships for Honours-level degree study are available to the value of $15,000 (payable in two equal installments after each census date in March and August).

Eligibility criteria

Applicants must be Australian citizens enrolled on a full-time basis in an approved Honours program. Relevant checks (National Police Check, Australian Government security clearance) will be required. Scholarship holders must complete a 6-day work placement. Acceptance of the scholarship cannot be deferred.

How to apply

Assessment of successful candidates will be made by a selection panel consisting of up to four Australian Institute for Machine Learning (AIML) academics representing the University of South Australia, the University of Adelaide, and the Defence Science and Technology Group (DSTG).

Scan the QR code to apply.

Or go to: bit.ly/41hf5C9

About AIML

AIML is Australia's first institute dedicated to research in machine learning. Machine learning underpins the business models of the largest corporations and has the potential to deliver massive social, economic, and environmental benefits. Our world-class research strengths lie in machine learning, artificial intelligence, computer vision, and deep learning.

Further information on projects can be found on the reverse side of this flyer.

CSIRO · The University of Adelaide · University of South Australia · Australian Government Department of Defence Defence Science and Technology Group · DAIRNet

Research Theme: Continual Learning and Adaptation of Resilient Vision Models in Uncertain Real-world Environments

This will enhance computer vision solutions, bolstering reliability, adaptability, and cost-efficiency spanning industries from healthcare to robotics, while contributing to sustainability and strengthening sovereign capabilities in the digital economy.

List of projects and supervisors

Dr Feras Dayoub (AIML, University of Adelaide)

- Continual learning for mobile robot visual memory
- Continual learning and adaptation of resilient vision models in uncertain real-world environments

Dr Ravi Garg (AIML, University of Adelaide)

- Robust localisation and tracking with implicit and semi-explicit maps
- Self-supervised learning of single and multi-view splat

Dr Josh Chopin (University of South Australia)

- Evaluate the effectiveness of various adversarial machine learning techniques on Synthetic Aperture Radar (SAR) imagery

Associate Professor Belinda Chiera (University of South Australia)

- Responsible AI, bias-aware machine learning, and data visualisation

Dr Lui Cirocco (University of South Australia)

- BNN methods to investigate classification uncertainty qualification in identifying objects in a Navy UAV video dataset of maritime objects

Supervisors to be determined

- Deep dive into SARfish datasets
- Develop models that can incrementally learn about new data without forgetting previously acquired knowledge, a common issue known as catastrophic forgetting
- Development and application of continual learning algorithms that enable machine learning models to adapt and improve continuously in dynamic environments

Enquiries: Contact Hilary Brookes at hilary.brookes@adelaide.edu.au

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