CSIRO Industry PhD Program (iPhD) at Adelaide University, Adelaide, South Australia. SA

Project title: AI-driven sensemaking and Multi-Detector Fusion for Attributing and Detecting Synthetic Media

Description: The proliferation of synthetically generated media, including images, text, speech, and video, has emerged as a significant contributor to the spread of **deepfake and disinformation**. While numerous efforts are underway to develop tools capable of detecting such media, identifying the intent behind their creation, and determining their source, current detection methods are generally tailored to specific generation techniques. Consequently, no single detector is effective across various types of manipulations or synthetic content.

As synthesis methods continue to evolve, potentially combining multiple existing approaches, detection becomes even more challenging. A promising direction lies in integrating diverse detection algorithms into a unified platform, enabling the fusion of their outputs to produce a more robust and comprehensive understanding.

However, most existing fusion methods rely on statistical or heuristic analysis of individual detection scores, offering limited insight to human analysts. This project proposes to go beyond these approaches by exploring AI-driven sensemaking techniques that leverage both quantitative and qualitative information hidden within each detector. This "meta-knowledge" could include model confidence, intermediate representations, or latent features that are typically not exposed to the analyst.

The goal is to design and evaluate novel AI methods for intelligent fusion and interpretation, enabling more accurate, explainable, and actionable detection of synthetic media.

Eligibility

The student must:

a) Be an Australian citizen or Permanent Resident, or a New Zealand citizen.

b) Meet participating university PhD admission requirements.

c) Meet university English language requirements.

d) Not have previously completed a PhD.

e) Be able to commence the Program in the year of the offer.

f) Enrol as a full-time PhD student. Part-time arrangements may be considered if approved by the supervisory team and in accordance with university policy.

g) Be prepared to be located at the project location(s) that the host university has approved and, if required, comply with the host university's external enrolment procedures.

h) Be prepared to undergo onboarding to CSIRO, which will include passing mandatory government background checks (allow for between 4 to 8 weeks) and complete any other CSIRO requirements.

Please note that enrolment into this project is dependent on the execution of a funding agreement between the University and partner organisations.

Deadline for applications: **Tuesday 31 March 2026 23.59pm [UCT]**

For any questions about the Industry PhD please email: -

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CSIRO Research Unit Data61

For any questions about the application procedure please email:

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