

National Industry PhD Program: Developing Explainable AI Agents for Autonomous Driving Closed-Loop Systems

Adelaide University and Motovis Australia invite applications for this industry PhD project, optimising autonomous driving systems.

Program overview

Degree

Doctor of Philosophy

Research area

Computer Science

Academic supervisor

Dr Zhibin Liao

Industry partner

Motovis Australia Pty Ltd

Expected commencement

2027

The successful candidate will receive:

- Admission to a PhD program at Adelaide University;
- An Adelaide University Research Scholarship for 4 years, paid at \$53,815 p.a., and a tuition fee waiver;
- Supervision from research specialists at Adelaide University and Motovis;
- Industry embedment with Motovis; and
- Access to professional development opportunities through the University's Graduate Research and Innovation Training program.

Project details

As autonomous vehicles continue to advance, society expects them to significantly reduce accidents. However, current AI development workflows for autonomous driving rely heavily on manual data analysis, model development and deployment, making it difficult to effectively utilise the rapidly growing volumes of driving data.

This project builds an AI-driven system to automate the full cycle: processing data, improving models, and deploying updates. With continuous learning and explainable AI, it aims to make development faster, safer, and easier to validate for real-world driving.

The resulting platform will accelerate autonomous driving development, by enabling safer and more reliable intelligent transportation systems.

This project will be undertaken in collaboration with Dr Zhibin Liao of the School of Computer Science and Information Technology, and research specialists at Motovis Australia. The student will be located at the Australian Institute for Machine Learning at Adelaide University's City Campus.

Eligibility Requirements

This opportunity is open to candidates who can meet the requirements for PhD admission at Adelaide University (including English language proficiency in the

relevant academic area), and who can demonstrate suitable experience in computer science, artificial intelligence, robotics or a related field (through a high-quality Honours or Masters degree).

In addition, the successful applicant should be able to demonstrate the following attributes:

1. Knowledge of machine learning and deep learning methods, and experience with autonomous driving datasets or computer vision would be advantageous.
2. Hands-on programming experience in Python and deep learning frameworks such as PyTorch, with the ability to develop and train AI models for large-scale data.
3. Software development and system implementation experience, including familiarity with data pipelines, cloud or distributed computing, and tools such as Docker or Linux environments. Experience in building foundation AI systems or working with real-world datasets would be highly desirable.

The successful candidate must be able to enrol as a full-time PhD student at the University in the year of the offer. They must remain based in Adelaide, South Australia for the duration of the award.

Students that have previously completed a PhD program are, unfortunately, ineligible for the National Industry PhD Program.

Application Process

To apply, please email the following documents to principal supervisor Dr Zhibin Liao (zhibin.liao@adelaide.edu.au) with the subject line 'National Industry PhD Program application':

- CV
- Cover Letter (of not more than 2 pages) outlining your interest in the PhD project and describing how your background and research area align with the project
- Degree certificates and relevant academic transcripts, with translations of non-English documentation

Applications close on **30 November 2026**. Please note that applications will be shortlisted on a rolling basis, and the scholarship advertisement may be withdrawn early if a suitable candidate is identified.

About the National Industry PhD Program

The National Industry PhD Program is an Australian Government initiative to enhance workforce mobility among graduate researchers, and to promote knowledge transfer between academia and industries across all areas. PhD candidates under this program are connected with academic supervisors and industry-based researchers, to co-design

innovative, applied research projects. Through their doctoral candidature, students will experience research in both university and industry settings, and undertake specialised training in research translation and commercialisation.

Enquiries

For enquiries about this opportunity please contact Dr Zhibin Liao:
zhibin.liao@adelaide.edu.au

General Enquiries

Adelaide University Graduate Research School:
E: augrs.industry@adelaide.edu.au