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AI research helps businesses make better decisions

The University of Adelaide and MTX Group have entered into a research collaboration to develop new insights in machine learning (ML) and artificial intelligence (AI).

Bringing together their academic research and commercial expertise and experience, the two organisations will undertake specific, outcomes-focussed research. They will use AI to model uncertainty with a view to avoiding failure within systems that may be used in defence and business environments.

The University and MTX Group have jointly been awarded \$100,000 under the Artificial Intelligence for Decision Making Initiative which is a collaborative project between the Australian Government's Office of National Intelligence (ONI) and the Defence Science and Technology Group (DST).

Dr Duong Nguyen and Dr George Stamatescu from the University's School of Computer Science will work alongside Dr Ammar Mohemmed from MTX Group.

The University of Adelaide's Associate Professor Hung Nguyen, Research Theme Leader for Defence, Cyber and Space in the Faculty of Science, Engineering and Technology, said: "Working together with commercial partners like MTX provides a vital extension for our cutting-edge research, including the potential to deliver commercial solutions that generate positive outcomes in the real-world.

"MTX has a unique capability in the design and development of decision making solutions and we are excited about working together to solve these challenging problems."

An initial research project will explore the possibilities for reinforcement learning – a machine learning technique designed to remove and correct errors in artificial systems operating in variable environments – to develop algorithms that help organisations make better decisions in the allocation of resources for sustainable operations, including in high security environments. Potential outcomes of the collaboration could help industries ensure product safety and assist commodity markets set prices of resources.

The collaboration will draw on the University's leading machine-learning research capabilities and MTX's unique capabilities in the design and development of industrial and commercial machine learning solutions.

Mr Ben Papps, CEO of MTX Asia Pacific, said: "MTX has deep experience in the commercial application of data and analytics to provide our clients with robust insights enabling more informed decisions and better experiences for the people and communities they serve."

"By bringing our AI and ML product development and commercialisation expertise together with the outstanding research capability at the University of Adelaide, we hope to produce new techniques that result in real-world efficiencies in the delivery of critical services, business operations and digital experiences.

"This collaboration is a terrific addition to our Adelaide regional services hub and will enhance the positive impact we make with the government agencies, businesses and community of South Australia."

The University of Adelaide is a recognised leader in digital capability research through large-scale government investment in its Australian Institute for Machine Learning. In the 2021 Academic Ranking of World Universities (ARWU) the University was ranked 48th in the world for computer science and engineering.

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