

# Foreword

## Elanor Huntington FTSE

ATSE Board Member; Executive Director, Digital, National Facilities & Collections, CSIRO

ARTIFICIAL INTELLIGENCE (AI) is a powerful technology that has the potential to transform our lives for the better. A contributor to this volume, Stela Solar in her article identifies examples of how AI has been embedded into our daily routines, seamlessly enhancing accessibility, productivity and experiences. It is being used to improve healthcare, education, transportation, and many other areas. However, end-use AI product deployment in our daily lives also raises a number of ethical and social concerns. For example, how can we ensure that AI is used fairly and equitably? How can we prevent AI from being used to harm people? This needs to be addressed in the responsible and thoughtful design, development and application of AI technologies.

This collection of short papers provides key insights from experts on 'responsible AI' research. The papers explore some of the roadblocks and challenges ahead and importantly, highlight the need for Australia to capitalise on the promise of responsible AI.

Australia needs to support the growth of a domestic AI ecosystem. As Professor Katrina Falkner FTSE explains in her article, this support must ensure our workforce has the necessary skills for this AI future. Australia must support schools in STEM education, and teachers must be one of our top priorities. This includes providing ongoing, sustained teacher professional learning to allow our teachers to improve their STEM expertise and build

awareness of AI that they can use to train the future workforce.

Australia already has a number of pockets of success in AI applications. It is time for Australia to lean into the investment of our winners in AI and ensure that AI is used for good and that it benefits all Australians. For example, we have a strong track record in developing AI-powered solutions for healthcare, agriculture and mining. However, we need to do more to support the growth of our broader AI ecosystem and double down on our winners to create globally competitive products.

AI is a rapidly growing field, and we need to make sure that Australia is at the forefront of innovation. It has the potential to create significant economic benefits, and we need to ensure that Australia captures its fair share of these benefits. Australian-developed AI has the potential to address some of our most pressing social challenges, such as climate change and inequality. By investing in AI, we can ensure that Australia remains competitive in this globally competitive field and also achieve productivity gains that boost our economy, and improve the lives of all Australians.

This ATSE / AIML report is a great starting point to inform the importance of Responsible AI to better understand AI's growing role in our lives. I commend the authors and look forward to the amazing responsible AI developments to come that will, we must all hope, reshape the world for a more peaceful, stable and prosperous future.



**PROFESSOR ELANOR HUNTINGTON FTSE** is a board member of the Australian Academy of Technological Sciences & Engineering (ATSE) and Executive Director, Digital, National Facilities & Collections, CSIRO. She leads the data-focused research, development and digital capability of CSIRO, and is a member of the CSIRO Executive. She has stewardship of a range of business lines including Data61, Space and Astronomy, and National Collections and Marine Infrastructure. Prof Huntington also leads major national infrastructure provided by CSIRO on behalf of the scientific community to assist with the delivery of research.