Essay 9 of 13 from the series:
*Responsible AI: Your questions answered*

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# An AI-literate community will be essential for the continuity of social democracy

**Kylie Walker**
**Chief Executive Officer, Australian Academy of Technological Sciences and Engineering**

Responsible artificial intelligence (AI) requires the development and use of AI to be aligned with the values of social democracy, such as freedom, respect, fairness and equality of opportunity while being transparent and accountable to the public.

People should be able to broadly understand how AI systems work, and how and when they are being used. AI should be deliberately crafted to be inclusive and have regard for marginalised members of society, and it should be applied for the benefit of all, rather than a select few. It should be used in a way that does not discriminate against or disadvantage any group of people.

IN CATALYSING THE industrial revolution, the steam engine fundamentally changed the way people lived, worked, defined and organised themselves. It brought widespread access to education, the rise of professional specialisation, cheaper goods, medical advances and longer life expectancy, and the promise of social mobility. It also brought exploitation, overcrowded cities, climate change, unmanageable volumes of waste, dislocation and social exclusion.

AI is the steam engine of today. It can, and almost certainly will, fundamentally change the way we live, learn, care, play and work. And it will change the way we define being human: when machines can responsively apply language and mathematics, and create art as well as, or better than, people, what does it mean to be human?

The opportunity to meaningfully shape the direction of this shift is still open — but it won't be for long. An AI-literate community is essential if we are to ride this revolutionary wave in a way that enables social democracy to thrive. AI will permeate every part of our lives; this means it is untenable for AI know-how to be the exclusive purview of engineers, scientists and technologists. To shape an inclusive and socially responsible future, we must prioritise AI literacy for those who care for the vulnerable, those who engage with social media, those who teach and learn, and those who work in every economic sector. In a word, we must prioritise AI literacy for everyone.

AI technologies replicate human-like intelligence, achieved by training machines and computer systems to do tasks that simulate some of what the human brain can do. They learn from and draw on large datasets that serve as their knowledge base and are trained to predict specific outcomes based on the patterns and structures found in these large collections of information.

It's tempting to think of datasets as neutral sources of information, but they are not. The people and places from which they're drawn, the questions they're tasked with responding to, and the context in which they're analysed all impact on the quality and focus of the information, and therefore drive the outcomes. For example, most large voice-based datasets are overwhelmingly male voices. As a result, voice-activated software responds much more readily to lower registers than to higher-pitched (i.e., female) voices. These systems can improve over time, becoming more complex and accurate as they take in more information. Understanding this can help users to better grasp how, when and why these potent AI technologies are used to inform the decision-making of political, social and economic organisations — and the potential inadvertent outcomes they can thereby produce.

AI literacy is even more important among decision-makers and their advisers. It is also essential that human rights and rule of law principles be incorporated into the development of AI, particularly in contexts where AI systems assist or replace human decision-making. Australian democracy is built on the core values of freedom, respect, fairness and equality of opportunity:[37] these values are central to our community to promote a secure, inclusive, prosperous and peaceful place to live. They should therefore be the guiding principles for developing and using AI-powered technologies. The Australian Government's AI Ethics Principles framework[38] provides a starting point (so long as it is consciously and actively applied). Further binding and non-binding instruments, regarding specific aspects of AI and its use in specific sectors and contexts, will be needed to comprehensively address the use of this complex and rapidly evolving technology.

The relative merits of using AI in different applications is highly context-dependent, and the strengths and limitations of the technology must be considered and reconsidered as it evolves. AI technologies are already being applied in deciding who gets a job interview or a mortgage, as well as which movie a streaming service recommends to individual users. An AI-related mistake or built-in bias in the first two instances has much more serious consequences than in the latter. Literacy for AI users (such as loan assessors and human resource officers) would support greater awareness of the technology's limitations, and hopefully a more equitable outcome.

AI systems should also be required to be safe and secure throughout their operational lifetime, and it should be easy to verify their security where applicable and feasible. Therefore, policies and regulations that apply to organisations and industries require appropriate tailoring, particularly in alignment with the potential risks and harms resulting from AI technologies.

If used appropriately, AI technologies could progress commitments to the United Nations Sustainable Development Goals, including Goal 4 (which aims to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all). Applied by a sophisticated teacher, AI can be used to personalise a student's learning journey by analysing a student's learning history and suggesting improvements. It could also reduce teachers' administrative workloads, freeing them up to devote more time to their students.

The development of AI tools, and the algorithms and inputs they use, is often quite opaque in nature, naturally leading to concerns about how these tools are being applied. It is therefore crucial to increase transparency in the processes involved in AI development and deployment where possible.

To support agency and independence, it's also important to communicate with those impacted about how an AI solution was created and developed, why it was put into use, how it is maintained and updated, and the circumstances under which it may be retired.

All these scenarios rely on a level of AI literacy to support informed consent and decision-making, to mitigate the risks of AI being used by bad actors, and to create the conditions for AI to benefit all members of society.

AI literacy includes the ability to understand the basics of AI, how it works, and its potential impacts. It further requires a whole-of-life approach to learning for every member of the community.

An AI-literate society is one in which everyone can exercise agency and discretion as we engage with AI technology. It's a society in which we understand how to set the boundaries for this rapidly evolving technology and direct it towards an inclusive, kind, well, productive and happy society.

An AI-literate society is one in which these powerful new tools can be used for the benefit of all people.

*KYLIE WALKER is the Chief Executive Officer of the Australian Academy of Technological Sciences and Engineering. She works with Australia's leaders in applied science, technology and engineering to advise decision-makers, lead crucial national conversations to solve complex challenges, and support Australia's technology-powered, human-driven future.*

*She is a recognised leader in equity, diversity and inclusion in STEM.*

# Essays

## SECTION 1: INTRODUCTION



## SECTION 2: WHAT DO WE NEED TO BE TALKING ABOUT?



## SECTION 3: WHAT ARE THE NEXT STEPS?



For acronyms, abbreviations and endnotes please see the composite document with all the essays.

# Responsible AI

## Your questions answered

ACKNOWLEDGEMENTS
The Australian Academy of Technological Sciences and Engineering (ATSE) and the Australian Institute for Machine Learning (AIML) acknowledge the Traditional Owners of the lands on which we meet and work and we pay our respects to Elders past and present. We recognise the deep knowledge and practices embedded in the oldest continuous culture on the planet. Australia's history of engineering, technology and applied science spans more than 60,000 years.

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PROJECT TEAM
Eddie Major, Dr Kathy Nicholson, Peter Derbyshire and Suryodeep Mondal

DESIGN AND PRODUCTION
Elizabeth Geddes, Edwyn Shiell and Alexandra Horvat

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*Cover image: An artist's illustration of artificial intelligence (AI). This image represents the boundaries set in place to secure safe, accountable biotechnology. It was created by artist Khyati Trehan as part of the Visualising AI project launched by Google DeepMind. Source: unsplash*

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