SUBMISSION

DATA61 DISCUSSION PAPER

ARTIFICIAL INTELLIGENCE: AUSTRALIA'S ETHICS FRAMEWORK

31 MAY 2019

On 31 May 2019, The Australian Council of Learned Academies (ACOLA) provided a submission to the Department of Industry, Innovation and Science consultation on the Data61 discussion paper *Artificial Intelligence: Australia's Ethics Framework.*

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AUSTRALIAN COUNCIL OF LEARNED ACADEMIES

ACOLA is the forum whereby Australia's Learned Academies and our Associate members come together to contribute expert advice to inform national policy; and to develop innovative solutions to complex global problems and emerging national needs.

Submission to the Department of Industry, Innovation and Science consultation on the Data 61 discussion paper *Artificial Intelligence: Australia's Ethics Framework*

The Australian Council of Learned Academies (ACOLA) welcomes the opportunity to respond to Data61's discussion paper *Artificial Intelligence: Australia's Ethics Framework*.

ACOLA provides the platform for collaboration between Australia's four Learned Academies – Australian Academy of the Humanities, Australian Academy of Science, Academy of Social Sciences in Australia and Australian Academy of Technology and Engineering. Through the Learned Academies and with the leading expertise of their fellowships, ACOLA brings more than 2,000 of the nation's most eminent scientists, researchers, scholars and practitioners together to contribute to its rich source of expert knowledge and to inform national policy about complex multidimensional problems and emerging national needs.

ACOLA's Horizon Scanning studies have been commissioned by the National Science and Technology Council (formerly the Commonwealth Science Council) through Australia's Chief Scientist, Dr Alan Finkel AO FAA FTSE FAHMS. ACOLA's current project on artificial intelligence (AI) is supported by the Australian Research Council, the Department of Prime Minister and Cabinet, and the Department of Industry, Innovation and Science. Delivered in collaboration with the Australian Academy of Health and Medical Sciences and the New Zealand Royal Society Te Apārangi, the project examines the effective and ethical development of AI. This ACOLA study will inform considerations into the social, legal, ethical, technological and economic implications for broader use of AI in Australia and New Zealand.

The Expert Working Group (EWG) for the AI project – Professor Toby Walsh FAA, Professor Neil Levy FAHA, Professor Genevieve Bell FTSE, Professor Anthony Elliot FASSA, Professor James Maclaurin, Professor Iven Mareels FTSE, and Professor Fiona Wood AM FAHMS – were responsible for the development of the ACOLA report and deriving its Key Findings. The report will be launched in the coming months.

Introduction

Artificial intelligence offers myriad new opportunities and shows enormous potential, with the capacity to improve wellbeing and provide societal, economic, and environmental benefits if responsibly developed. However, it also presents significant risk, including the potential to increase inequalities within and between nations.

While AI is likely to cause short- to medium-term disruption, it may also generate long-term growth in areas such as health, agriculture, environmental sustainability, and manufacturing. Although many of the opportunities for AI are still many years away, this disruption will require thorough planning from government and industry to ensure the responsible management and implementation of AI technologies. Australia's actions today will set a course toward or away from these opportunities and their associated risks.

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A national framework for AI

ACOLA supports the development of a national AI ethics framework, indeed, the importance of a national framework is highlighted in ACOLA's upcoming AI report. The report stresses the need for such a framework or strategy to ensure the safe, responsible and strategic implementation of AI. ACOLA suggests that a national framework should examine the ethical, legal and social barriers to, and risks associated with, AI. It should also allow areas of major opportunity to be established, and target development towards maximising the social and economic benefits of AI. A national framework for AI should articulate the interests of society, uphold safe implementation, be transparent, and promote wellbeing.

The eight core principles of AI referred to in the Data61 discussion paper provide a strong framework within which AI can be developed and implemented ethically to benefit society. In addition to these core principles, key actions to ensure an effective AI framework could include:

1. Incorporate educational platforms and frameworks that are able to foster public understanding and awareness of AI.
2. Create guidelines and advice for procurement, especially for public sector and small and medium enterprises, which informs stakeholders of the importance of technological systems and how they interact with social systems and legal frameworks.
3. Create enhanced and responsive governance and regulatory mechanisms to deal with issues arising from cyber-physical systems and AI through existing arbiters and institutions.
4. Ensure integrated interdisciplinary design and development requirements for AI and cyber-physical systems that have positive social impacts.
5. Investment in the core science of AI and translational research, as well as in AI skills.

By building these components into a national AI ethics framework, it ensures not only a strong interdisciplinary foundation for the design of AI, but also responsive legal and inclusive ethical guidelines for implementing AI.

Community engagement and inclusion

An AI framework will be most thorough if developed in conjunction with those it will affect. Meaningful consultation with civil society, industry, academia and government is required to gain a collective view of societal goals and boundaries, to ensure AI is developed within sustainable, ethical and socially responsible boundaries that encourage technological advancement while preventing undesirable outcomes.

Proactive engagement, consultation and ongoing communication with the public about the risks and benefits of AI will be essential for building community awareness. Earning public trust will be critical to enabling acceptance and uptake of AI technologies. Since AI is dependent on data, ensuring public trust will be essential to maximising its performance; trust is not an optional add-on, but integral to the technology's adoption.

In addition to transparency in the way AI will impact people, there is a need for initiatives that promote and provide broader digital literacy and understanding within society to support the transition to an AI future without marginalising sections of the community – particularly those with low digital literacy who risk being further isolated by lack of access.

Community education initiatives should promote general knowledge and understanding of the principles of AI, including how data is used, the limitations of AI, and what we can expect from the technology. Explaining AI in this way will be critical to ensuring that individuals can make informed decisions about the technology and how they use it in their everyday lives. Education should also encompass the risks and opportunities of AI. The general public should be aware of which risks are realistic. For example, AI technologies tend to impact on tasks rather than whole occupations, so the extent of disruption may be smaller than media outlets sometimes suggest. Education should bring the public to understand that the genuine risks are not inevitable but can be managed.

The complex nature of AI, and its broad range of uses, requires a holistic and collaborative framework to guide its ethical uptake. AI can provide a range of benefits if delivered within the right balance of governance, local regulatory mechanisms, societal engagement, industry support, business compliance, and the deepening of digital understanding in society. An ethical framework that encourages these factors will be an important step in ensuring Australia harnesses the opportunities AI provides for the wellbeing of society.

ACOLA and the EWG for the AI Horizon Scanning project would be pleased to discuss the ACOLA AI report with Data61 and the Department of Industry, Innovation and Science once it is published. The contact at ACOLA is Dr Lauren Palmer, Chief Executive Officer (Interim), on (03) 9864 0933 or lauren@acola.org.au. Further details of ACOLA's Horizon Scanning project on AI can be found on the ACOLA website at https://acola.org/hs4-artificial-intelligence-australia/.