

Ethics for AI & ADM - SUBMISSION

Australian Human Rights Commission & World Economic Forum

Artificial Intelligence: Governance & Leadership White paper 2019

Who Are We?

Ethics for Artificial Intelligence & Automated Decision Making ("Ethics for AI & ADM") is a membership based, not-for-profit organisation that seeks to promote awareness of the social and business benefits and pitfalls of the design and implementation of artificial intelligence throughout society.

The members of Ethics for AI & ADM currently number in excess of 200 persons, who are drawn from the highest levels of the corporate and government sectors, educational and research institutions, and social and business consultants & theoreticians. A measure of our progress is that we have representatives on two committees that have been set up to establish international (ISO) and Australian (AS) Standards in the areas encompassed by "AI, Ethics & the Law".

Internationally, there have been increasing numbers of public revelations and concerns about discrimination, bias, and privacy infringements against individuals by giant data-collecting technology companies and their machine learning algorithms. The fanciful warnings of the threat of "surveillance capitalism" to privacy rights and civil liberties - via intrusive, constant monitoring and use of behaviour data to manipulate future behaviour at scale - are increasingly coming true.

A central focus of Ethics for AI & ADM's activities is the promotion of the huge benefits that can be derived from the widespread use of AI within society – while increasing awareness of the problems that can arise from subtle flaws in the design of the algorithms and data structures that drive and underpin the functionality of AI (e.g. unconscious bias), while ensuring appropriate governance standards are designed and widely instituted.

Overview

Given our group's mission to both promote the benefits that can be derived from AI for society and support practical guidance to ethically develop AI, the White Paper does not adequately address the opportunity for Australia to embrace AI. The White Paper states that "AI is designed by human beings who possess inherent biases and is often trained with data that reflects the imperfect world that we live in." While this is true, the paper does not consider that, in many cases, an AI could well be less biased than the human processes we already have in use.

We can control the inputs we give AI, and restrict its classification systems in a way that is impossible with humans. The simple assumption that humans make biased decisions, and

that AI must make more biased decisions, has influenced the White Paper. It assumes that further regulating AI, rather than judging the *performance* of the use of AI through existing regulation, is desirable.

Placing so much emphasis on AI technologies alone frames it as a technical issue that can be legislated and regulated. However, if we seek to ensure AI and ADM remains ethical in both its design and implementation, we must frame it as a socio-technical issue. The focus on AI reflecting and sometimes magnifying human bias appears to lay all the blame on the AI while it may actually be the bias baked into the data sets themselves that ends up magnified by the algorithm/AI. Such bias is generally a reflection of a society's values and beliefs shaping what is counted and valued as data (big and small). As data and AI need to work together in all cases, we must ensure that we are not putting all the blame for bias magnification on the AI lest we lose sight of the ways that mechanisms to ensure better oversight of ways data structures needs to also be a part of any strategy for supporting equity, diversity and social justice.

1. What should be the main goals of government regulation in the area of artificial intelligence?

The Australian government should be supporting private sector corporations, not-for-profits, the public sector and R&D organisations by providing direct cash innovation grants and related tax deductions that support the development within Australia of leading edge AI technology and applications.

The main regulation to be undertaken by the government should be limited to an assessment of the actual and potential applications of those technologies belonging to applicant innovators, to ensure they have a reasoned and explained basis for their application for R&D innovation grants in the area of Ethics for AI & ADM.

Globally, the investment in AI R&D is growing rapidly. McKinsey research suggests the penetration of AI outside of the tech sector or larger sector firms is limited. Further, Austrade reported that in Australia 50% fewer firms than other leading countries are actively investing in AI. Our internal data lends support to this, with most of our own AI collaborations being with large government agencies, technology companies, large listed companies and start-ups.

McKinsey cite two reasons for companies not yet embracing AI, namely, they are often unsure of the business use case or the returns. There is much commentary on the global arms race in AI technologies at both the government and corporate level. Governments are stepping up the investment in Artificial Intelligence.

For example:

- France is committing to 1.5b Euros in public funding for AI by 2022
- UK Government's Industrial Strategy committing \$2 billion pounds p.a. by 2020, into future-focused R&D, particularly in AI and robotics
- China has expressed a desire to be the world leader in AI by 2030 and home to a US\$150 billion AI Industry.
- In 2016, the US government spent \$1.6b on non-classified AI projects.

- Singapore's National Research Foundation looking to invest S\$150m over 5 years into AI. One stream is focused on increasing industry adoption (smart cities, finance and health) by delivering 100 meaningful AI projects and proofs-of-concept to solve real-world problems quickly for end-users.

Exponential increases in computer power, data, algorithm performance and funding are fuelling rapid advances in AI and robotics. Hence, there is growing concern that Australia's innovation-led economic growth will be limited if we continue to underinvest in terms of AI/Automation investment at both government and corporate level.

2. Considering how artificial intelligence is currently regulated and influenced in Australia:

(a) What existing bodies play an important role in this area?

The powers needed to regulate the ethical use of AI already exist in other bodies - both legally and code based. At most, a Responsible Innovation Organisation (RIO) should report, coordinate regulatory bodies, and maintain a code of conduct, and be funded accordingly. Its funding should partly be derived voluntarily from bodies participating in the code of conduct. This voluntary funding would prevent the RIO from imposing its own moral code out of step with community values.

(b) What are the gaps in the current regulatory system?

It is unfortunate that some of the most powerful AI tools are also the most opaque. The advanced capabilities of AI are accumulating in large part with private parties and are for a large part proprietary.

The fact that AI systems are no longer programmed by humans in a linear manner can be problematic - for both its uses and applications and for potential governmental regulation to ensure AI's impacts upon societal good. (For example, Google Brain develops AI that allegedly builds more advanced AI better and faster than humans can - in a manner that is currently non-transparent.)

3. Would there be significant economic and/or social value for Australia in establishing a Responsible Innovation Organisation?

Innovation is the creation of a hypothesis for further investigation and testing. The conclusion drawn from a tested hypothesis usually includes a consideration of ethics and regulation as part of a political, economic, social and technological (PEST) analysis. As anyone involved in innovation or R&D knows, the processes are not defined and are, by necessity, fluid. The creation of an external regulatory RIO, enforcing "practical frameworks and other resources for assessing the potential discriminatory effects", would inhibit innovation in Australia.

An RIO, replete with its own internal biases, would stifle innovation, as innovators tried to guess what it was expected to produce. Additionally, the reporting (without which the RIO could not work) would slow innovation projects, which need all its time to retest the hypothesis and increase its costs from a fixed budget.

4. Under what circumstances would a Responsible Innovation Organisation add value to your organisation directly?

As a source of development funding and by increasing public awareness of the issues raised in this Submission.

5. How should the business case for a Responsible Innovation Organisation be measured?

By its assistance and support of AI R&D and innovation, rather than by its control of procedures.

6. If Australia had a Responsible Innovation Organisation:

The Australian Government should be investing in an RIO that, rather than being a new regulator, has the goals of promoting/supporting the development of AI to ensure Australia's economic, social, and environmental competitiveness. To that extent, the body should, itself, be a model of 'ethical' AI.

The RIO should initially target mid-size firms. Mid-size firms have strong potential to contribute to Australia's Innovation drive. Collectively, they employ 2.5 million people and turnover \$717 billion. A 2016 survey of CFOs found 70% of mid-size businesses invest less than \$100,000 p.a. in Innovation. Hence, investment in AI is lagging and will be pivotal for long term business sustainability.

As such, mid-size firms face significant growth challenges. Some companies are growing too slowly to survive disruption facing many industries, whereas others may be struggling to keep pace with the growth opportunities in their midst. Both growth challenged mid-size firms share a need for increased:

- Access to capital
- Access to talent
- Assistance with costs to innovate.

Intervention and regulation in the innovation process will simply stifle innovation in Australia.

Having said that, a voluntary code-of-conduct would help the staff involved in innovation anticipate ethical problems. This should be the focus of proposed RIO.

