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New Zealand Government

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Tatauranga Aotearoa

ALGORITHM CHARTER FOR AOTEAROA NEW ZEALAND

The value of algorithms

Government agencies use data to help inform, improve and deliver the services provided to people in New Zealand every day. Simple algorithms can be used to standardise business processes to ensure scarce resources are distributed equitably. More complex algorithms can be used to distil information from large or complex data sets to support human decision-making and reveal insights that could not easily be revealed by human analysis alone.

These algorithms can be used to help government better understand New Zealand and New Zealanders. This knowledge helps government make good decisions and deliver services that are more effective and efficient. The use of algorithms can mitigate the risk that human biases will enter into the administration of government services and result in real benefits for everyone.

However, the opportunities also bring fresh challenges. For example, human bias could be perpetuated, or even amplified by, algorithms that are not designed and operated in thoughtful ways. Transparency and accountability are critical to ensuring that the public can trust and support the government to use these tools in appropriate ways.

This Charter is a commitment by government agencies to carefully manage how algorithms will be used to strike the right balance between privacy and transparency, prevent unintended bias and reflect the principles of the Treaty of Waitangi.

Definitions

There are a wide range of advanced analytical tools that can fit under the term 'algorithm'. These range from less advanced techniques such as regression models and decision trees, which primarily support predictions and streamline business processes, through to more complex systems, such as neural networks and Bayesian models, which can take on properties of machine learning as they make advanced calculations and predictions.

A good discussion of the different types of predictive algorithms and the challenges of defining these is contained in 'Government Use of Artificial Intelligence in New Zealand' (New Zealand Law Foundation and Otago University, 2019).

The risks and benefits associated with algorithms are largely unrelated to the types of algorithms being used. Very simple algorithms could result in just as much benefit (or harm) as the most complex algorithms depending on the content, focus and intended recipients of the business processes at hand. As a consequence, this Charter does not specify a technical definition of an algorithm. It instead commits signatories to take a particular focus on those algorithms that have a high risk of unintended consequences and/or have a significant impact if things do go wrong, particularly for vulnerable communities.

Review

The Algorithm Charter for Aotearoa New Zealand is an evolving piece of work that needs to respond to emerging technologies and also be fit-for-purpose for government agencies. After twelve months a review of the Algorithm Charter will be conducted, to ensure it is achieving its intended purpose of improving government transparency and accountability without stifling innovation or causing undue compliance burden.

Foundations

The Algorithm Charter is part of a wider ecosystem and works together with existing tools, networks and research, including:

Principles for the Safe and Effective Use of Data and Analytics (Privacy Commissioner and Government Chief Data Steward, 2018)

Government Use of Artificial Intelligence in New Zealand (New Zealand Law Foundation and Otago University, 2019)

Trustworthy AI in Aotearoa – AI Principles (AI Forum New Zealand, 2020)

Open Government Partnership, an international agreement to increase transparency

Data Protection and Use Policy (Social Wellbeing Agency, 2020)

Privacy, Human Rights and Ethics Framework (Ministry of Social Development).

Assessing likelihood and impact

The Algorithm Assessment Report found that advanced analytics and data use are an essential part of delivering public services. Applying the Charter to every business rule and process would be impossible for agencies to comply with and not achieve the intended benefits of the Charter.

However, where algorithms are being employed by government agencies in a way that can significantly impact on the wellbeing of people, or there is a high likelihood many people will suffer an unintended adverse impact, it is appropriate to apply the Charter.

Charter signatories will make an assessment of their algorithm decisions using the risk matrix below. This supports their evaluation, by quantifying the likelihood of an unintended adverse outcome against its relative level of impact to derive an overall level of risk.

The risk rating determines the application of the Charter.

Risk matrix

Likelihood

Probable Likely to occur often during standard operations			
Occasional Likely to occur some time during standard operations			
Improbable Unlikely but possible to occur during standard operations			
Impact	***Low*** The impact of these decisions is isolated and/or their severity is not serious.	***Moderate*** The impact of these decisions reaches a moderate amount of people and/or their severity is moderate.	***High*** The impact of these decisions is widespread and/or their severity is serious.

Risk rating

Low The Algorithm Charter could be applied.	***Moderate*** The Algorithm Charter should be applied.	***High*** The Algorithm Charter must be applied.

Application and Commitment

The Charter will apply differently to each signatory. The risk matrix approach means that signatories can focus first on decisions that have a high risk and exclude most of the many business rules that government agencies use every day to give effect to legislative requirements and for business as usual activities. The intention is to focus on those uses of algorithms that have a high or critical risk of unintended harms for New Zealanders. This commitment will be reviewed in twelve months as part of the scope review.

New Zealand Government

ALGORITHM CHARTER FOR AOTEAROA NEW ZEALAND

This Charter demonstrates a commitment to ensuring New Zealanders have confidence in how government agencies use algorithms. This Charter is one of many ways that government is demonstrating transparency and accountability in the use of data. However, it cannot fully address important considerations, such as Māori Data Sovereignty, as these are complex and require separate consideration.

Commitment:

Our organisation understands that decisions made using algorithms impact people in New Zealand. We commit to making an assessment of the impact of decisions informed by our algorithms. We further commit to applying the Algorithm Charter commitments as guided by the identified risk rating.

Algorithm Charter Commitments:

TRANSPARENCY

Maintain transparency by clearly explaining how decisions are informed by algorithms. This may include:

- Plain English documentation of the algorithm,
- Making information about the data and processes available (unless a lawful restriction prevents this),
- Publishing information about how data are collected, secured and stored.

PARTNERSHIP

- Deliver clear public benefit through Treaty commitments by:
  - Embedding a Te Ao Māori perspective in the development and use of algorithms consistent with the principles of the Treaty of Waitangi.

PEOPLE

- Focus on people by:
  - Identifying and actively engaging with people, communities and groups who have an interest in algorithms, and consulting with those impacted by their use.

DATA

- Make sure data is fit for purpose by:
  - Understanding its limitations,
  - Identifying and managing bias.

PRIVACY, ETHICS AND HUMAN RIGHTS

- Ensure that privacy, ethics and human rights are safeguarded by:
  - Regularly peer reviewing algorithms to assess for unintended consequences and act on this information.

HUMAN OVERSIGHT

- Retain human oversight by:
  - Nominating a point of contact for public inquiries about algorithms,
  - Providing a channel for challenging or appealing of decisions informed by algorithms,
  - Clearly explaining the role of humans in decisions informed by algorithms.

Signed

Chief Executive: **Chief Privacy Officer:** **Senior Manager responsible for algorithms:**

Organisation:

Date: