



AI threatens Indigenous data sovereignty and digital self-determination

Building ethical AI requires shifting power to Indigenous communities – in data control, design, and governance.



by [Margaret Yun-Pu Tu](#)

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Artificial intelligence (AI) technologies are rapidly transforming our world, but the critical issues of the sovereignty of Indigenous data and Indigenous digital self-determination remain under-addressed.

For Indigenous communities around the world, AI is not merely a technological development. It is a potential new form of colonization – one that risks marginalizing their languages, cultures and agency unless meaningful safeguards are established. Indigenous communities must be seen not as mere beneficiaries of digital policy, but also as rightful leaders in shaping it.

With Taiwan and Canada expanding their partnerships in science, technology and democratic exchange, these two nations are in a unique position to co-create models of Indigenous-centred innovation to address this problem.

By integrating Indigenous knowledge systems into AI governance, developing ethical data practices and jointly investing in Indigenous-led research, the two countries can move toward shared leadership in global digital justice.

Such collaboration would not only safeguard cultural diversity in the age of AI. It would also redefine what a meaningful, future-oriented partnership looks like between democratic societies committed to equity, Indigenous sovereignty and global collaboration.

A history of co-operation

In April 2024, the two countries signed a bilateral [Science, Technology and Innovation Agreement](#) that established new channels for collaboration in AI, semiconductors and biotechnology. These efforts were further strengthened by Taiwan's launch of the "[chip-based industrial innovation program](#)," which promotes generative AI and emerging technologies. It also invites Canadian AI and semiconductor firms to become partners.

As the two countries strengthen ties across strategic and technological domains, it is also time to ask: Can this partnership also include the Indigenous perspective? Can it advance not only innovation but also a future led by, and connected with, Indigenous voices?

Canada's leadership in Indigenous data sovereignty has long served as a [reference point for Indigenous advocacy](#) in Taiwan where Indigenous Peoples make up roughly 2.5 per cent of the

population. Both countries are wrestling with similar questions: How can Indigenous communities assert control over their data, shape AI development and preserve cultural integrity in the face of digital transformation?

Canada has made important strides, such as requiring researchers and AI professionals affiliated with the Canadian Institute for Advanced Research (CIFAR) to complete training in [Indigenous perspectives](#), signalling a serious effort to embed cultural awareness into the national AI agenda.

In Taiwan, early steps are also under way with the release of [generative AI guidelines](#) for the public sector and a draft of a [Basic Law on Artificial Intelligence](#) that focuses on both innovation and human rights.

Resisting digital colonialism

AI systems are built on data and increasingly this includes Indigenous languages, traditional knowledge, and oral histories. These data are sometimes [collected without consent](#), stored in centralized databases and used to train commercial algorithms that offer little or no benefit to the Indigenous communities. That practice echoes historic patterns of dispossession and exploitation.

The First Nations Information Governance Centre in Canada has long advocated the [OCAP principles](#) – ownership, control, access and possession – as the cornerstone of Indigenous data sovereignty. While OCAP has been widely cited in health and demographic research, its integration into national AI policy frameworks remains limited.

As the federal government moves forward with its national AI strategy and legislation such as the [Artificial Intelligence and Data Act](#), the question is this: Will Indigenous data governance be meaningfully embedded or merely acknowledged in principle?

As AI systems [increasingly influence](#) language preservation, health-care access and digital identity, applying OCAP rigorously is no longer optional. It is essential to avoid repeating digital versions of extractive colonialism. Canada has the opportunity to lead globally by showing how OCAP principles can guide not just ethical AI use but also Indigenous-led AI development. The challenge is in implementation and accountability.

Cultural representation and language revitalization in AI

AI technologies [often misinterpret or ignore](#) Indigenous cultures, languages and contexts. This failure is symptomatic of a deeper issue: Indigenous cultures are frequently excluded from the datasets that train AI systems.

Some Indigenous communities are pushing back. In Aotearoa/New Zealand, Te Hiku Media partnered with NVIDIA to develop a [speech recognition model](#) for te reo Māori (the Māori language), achieving more than 90 per cent accuracy. The project succeeded because it was Indigenous-led and grounded in the values of the community. Efforts such as Mozilla's [common voice](#), which allows speakers of underrepresented languages to donate voice data to open-source models, offers another path forward.

The [Canadian Indigenous languages technology project](#) is another initiative that's particularly important. I recently had the opportunity to speak with Dr. Patrick Littell and his team, whose work centres on leveraging technologies such as AI and natural language processing in collaboration with Indigenous communities in Canada.

Given that many Indigenous communities in Taiwan are exploring similar approaches, I was especially struck by Dr. Littell's emphasis on developing technologies that can be sustainably maintained and meaningfully used by the communities themselves. The key lies not just in access to tools, but in Indigenous leadership in the design and deployment of these technologies.

How we see ourselves in AI governance

AI policies are largely shaped by governments, corporations and academic institutions, with Indigenous perspectives often missing. Yet the consequences of AI technologies are deeply felt by Indigenous communities, from surveillance and biometric data

collection to health-care algorithms and digital language tools.

There are signs of hope. The [Indigenous languages technology project](#) of the National Research Council is exploring collaborative approaches to language preservation in Canada through AI.

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In Taiwan, where 16 Indigenous groups are recognized by the government, AI policies remain largely silent on Indigenous rights. But there is an opportunity. By incorporating Indigenous-led frameworks into its digital policy agenda, Taiwan can take meaningful steps toward cultural preservation, ethical innovation and reconciliation.

True leadership in AI governance requires more than occasional consultation or symbolic inclusion of Indigenous Peoples. It demands structural shifts that place Indigenous communities at the centre of design, decision-making and accountability. Indigenous Peoples must move from being subjects of technology to co-creators of its governance. This is not only a question of justice, but one of building resilient, culturally grounded systems that benefit everyone.

To ensure that AI serves the interests of all communities, not just those with the most resources, several key steps are necessary:

- Governments must embed Indigenous data-sovereignty principles into national AI strategies.
- Technology developers should adopt consent-based frameworks for collecting and using Indigenous data.
- Indigenous communities must be recognized as equal partners, not subjects, in shaping the AI tools that affect their futures.
- Funding and resources must support Indigenous-led AI research and infrastructure.

AI can either widen the digital divide or help bridge it. It can erase cultures or help revitalize them. The difference lies in who has control and whose values shape the systems we build. For Indigenous Peoples, sovereignty in AI is not a fringe issue. It is central to their rights, futures and survival in a digital world.

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Margaret Yun-Pu Tu

Margaret Yun-Pu Tu is a scholar from the Indigenous community, the Pangcah/Amis people on the east coast of Taiwan. She is also a PhD candidate in law, researching Indigenous rights and technology policy at the University of Washington.

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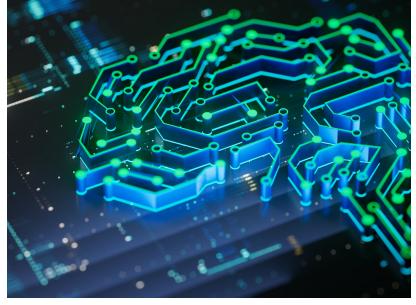
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