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# Decolonizing AI Data Centers: A Critique Through the Native Feminist Lens

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**Abstract:** Behind the rapid growth of artificial intelligence lies a network of data centers that support these systems. This paper explores the impact of these resource-intensive data centers, particularly in the arid southwestern U.S. Under a Native Feminist lens, the paper critiques the existing power structures that sustain the development of AI infrastructure. This work is in partial fulfillment of the ENGR184 course using the blueprint curriculum in Ref.[1,2] and captures in a collection [3].

## INTRODUCTION

Generative artificial intelligence (AI) has captured the interest of people and industries around the world. The rapid rise of generative AI has led industries to invest heavily in its infrastructure to adopt AI into their systems [4]. However, this comes at a cost to the environment. AI data centers, that house the computing power needed to handle billions of requests are driving up the electricity and water demand. According to the International Energy Agency, a single ChatGPT request uses 10 times the electricity of a Google search [5], while a University of California, Riverside study estimates AI data centers will withdraw up to 6.6 billion cubic meters of freshwater by 2027—nearly half of the UK’s total usage [6].

The Colorado River Basin, a critical water source for many of the western states, has become a hotspot for tech giants like Google and Microsoft. Their data centers built on cheap, desert land exploit the valuable resources the Colorado River supplies, often at the expense of vulnerable communities [7]. This paper focuses on the Colorado River data centers using a Native feminist framework to address how AI contributes to environmental degradation and resource inequality for Native communities.

## METHODS

Before analyzing AI infrastructure through a Native feminist lens, it is crucial to examine who benefits from AI’s domination. MIT economist Daron Acemoglu argues that AI is moving in a direction that “reinforces economic inequality while concentrating political power further in the hands of the ultra-wealthy” [8]. Tech giants and investors profit, while marginalized communities, particularly Native American tribes near resource-intensive data centers, bear the costs. The Mohave, Hopi, and Navajo Nations, for instance, face worsening water scarcity, with a third of the Navajo population lacking access to clean, reliable drinking water despite decades of legal battles with the government [9]. Already displaced by settler-colonial policies, these communities now endure further environmental degradation. As AI fuels corporate wealth, it widens economic disparities, forcing those outside the elite to bear the consequences.

In order to decolonize the infrastructure of AI, we must engage with the key challenges outlined by Native feminism, a framework that critiques settler colonialism and its ongoing impacts as discussed in a paper written by Maile Arvin et al [10]. Native feminism examines colonialism through its intersections with capitalism, environmental destruction, and systemic inequality, challenging the structures that uphold these injustices felt by Native communities. It rejects the colonial erasure of Native peoples and instead advocates for more than token inclusion. Native

feminism demands the recognition of Indigenous knowledge systems as essential to dismantling the dominant and oppressive power structures.

### **Settler Colonialism and AI Expansion**

For centuries, since the colonization of the Americas and westward expansion, Native communities have fought for their rights to their ancestral lands. Settler colonialism is an ongoing process that continuously reshapes Native ways of life, environments, and economies to serve capitalist interests. Over the past century, the U.S. government has repeatedly undermined the rights of Native communities living near and depending on the Colorado River. One of the most notable agreements between the U.S. government and Navajo was the Treaty of 1868. This treaty allowed the Navajo to return to their ancestral lands after being brutally and forcibly relocated by the federal government. Additionally, this treaty was intended to ensure their sovereignty and access to essential resources; yet like with many similar treaties, it has been repeatedly violated. For example, the Winters Doctrine, as examined by Diné scholar Andrew Curley, a professor at the University of Arizona specializing in Indigenous incorporation into colonial economies, was a U.S. Supreme Court decision which upheld the notions of settler colonialism by quantifying “‘reserved’ ‘Indian’ water rights” [11]. Over time, state and federal governments have continued to divert water away from Native communities to supply industrial and urban demand despite them claiming that Native people have a right to water.

The parallels between these incidents are evident in the justification for developing AI data centers. Much like the United States’ expansion under Manifest Destiny, whose justification revolved around nationalistic ideologies, the justification of building AI data centers are largely due to economic and capitalistic motivations. Today, the U.S. government allows corporations to exploit land as they please, prioritizing the economic benefits of lucrative markets such as AI and machine learning. Businesses profit and benefit from AI by automating tedious tasks and replacing human labor. Tech giants silence the voices of vulnerable communities such as Native people for their own gain. These dominating powers uphold the system of settler colonialism.

Native culture emphasizes a deep respect for the land, viewing its care as a communal responsibility. On the other hand, the government has made the Colorado river an entity that one can own over. Additionally, privately-owned AI data centers consume massive amounts of scarce natural resources, polluting the environment while enriching corporations. Land and water, which Native communities consider shared resources, are being taken for profit, continuing centuries of their dispossession.

Furthermore, state governments such as Arizona are attractive to tech companies not just because of cheap land but also due to lenient environmental and labor policies. For example, Arizona lures in these tech companies by offering tax incentives. The Arizona Commerce Authority currently offers the Computer Data Center Program which gives tax exemptions to businesses developing data centers in the state [12]. Policies like this have serious implications that worsen environmental issues and reinforce colonial patterns of Native dispossession and resource extraction. Governments perpetuate a cycle of settler colonialism by making policies that don’t consider the livelihoods and sovereignty of Native people.

### **Beyond Inclusion: Indigenous Sovereignty and AI**

For Indigenous communities to gain sovereignty, mere inclusion is not enough. Structural change must be made. Specifically, structural change that challenges settler colonialism and its economic and environmental impacts towards Native communities. Tech companies that are building their data centers around the area are well aware of the dwindling water supply in the

Colorado River Basin. For example, Meta has partnered with FIDO AI to implement an AI-driven leakage detection system aimed at replenishing water in the region [13]. While such initiatives appear beneficial for Native communities, it is critical to question whether these plans involve Native communities in their development and decision-making, such as its outlined in Native Feminist framework.

Furthermore, it's important to note that the environmental costs of data centers counteract the benefits of the initiative. They do not address the root issue of colonialism which has caused the overdevelopment and overuse of the river. Also, the act of subjecting the river to technological experimentation still reflects a colonial mindset. If these patterns continue, corporations will continue to dominate decision-making, using Indigenous lands for their own interest while simultaneously denying Native communities' control over their own homes and futures.

### **Acknowledge Indigenous Epistemologies**

The Colorado River is more than just a water source, it is the foundation of Native communities rooted in the region, providing food, water, medicine, and spiritual significance. For generations, Indigenous peoples have relied on the river's abundance, linking their identities to the land and its natural features. As Gwendena Lee-Gatewood, chairwoman of the White Mountain Apache Tribe, states, for Native communities, "Water is the giver of life" [14]. However, the modern exploitation of the river directly contradicts Indigenous epistemologies, or ways of knowing. Colonialism and capitalism have transformed land and water into commodities to be owned, extracted, and exploited. AI data center further this agenda, disregarding Indigenous knowledge systems, which emphasize respect, balance, and stewardship to nature.

Acknowledging Indigenous epistemologies is crucial in decolonizing AI data centers, and it requires centering Indigenous knowledge in water and land management decisions. While there is little documentation on Native perspectives regarding AI data centers specifically, similar viewpoints from discussions on drought and water resilience apply. A study by Brian McGreal, Susanna Eden, and Taylor McHugh of the University of Arizona's Water Resources Research Center highlights the importance of integrating traditional ecological knowledge into water management and environmental problem-solving. They emphasize how Indigenous knowledge, developed over millennia, offer sustainable strategies for managing arid landscapes which the dominant power structures could learn from. Former Navajo County Supervisor and water hauler Percy Deal emphasizes this need, stating, "having Native Americans consistently at the table will help everyone come together to overcome these [water] issues" [14]. Ensuring the participation of Native representatives in high-level discussion on the environmental and social consequences of resource extraction, accelerated by AI data centers, is a necessary step to acknowledging indigenous epistemologies. However, it is not enough for these discussions to take place, they must be followed by actionable policies that are consistently enforced and upheld. Native communities must be provided with the financial resources, institutional support, and legal frameworks necessary to implement the changes they deem essential. Only then can there be progress towards dismantling systemic injustices maintained by colonial power structures, such as AI data centers, that continue to undermine Indigenous sovereignty and wellbeing.

### **CONCLUSIONS**

AI's boom throughout the world has led to a demand to build harmful data centers that worsen climate change and resource inequality. AI data centers, owned by tech giants, continue the historical pattern of settler-colonialism and capitalism. They reinforce the power structures that oppress marginalized groups, such as Native communities. This makes frameworks such as

Native Feminism essential in problematizing the dominant powers behind the supported development of AI infrastructure. Native Feminism challenges the justification corporations and governments have made in order to exploit their homeland. Centering Indigenous knowledge and ensuring that Native communities have the resources to address root causes is key to addressing these injustices.

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