

Digital Empowerment for Indigenous Communities Using Generative Artificial Intelligence

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ABSTRACT

Historically, we have witnessed social exclusion of indigenous population due to socioeconomic status which can be supported by high representation of these communities in the most negative socio-economic statistics. Earlier technologies, for instance machine translation systems, also had higher levels of errors in translating written texts. Unique learnings and traditional knowledge could not be digitalized as there were no good methods of representing traditional knowledge in the computer. Emerging digital technologies offer opportunities for Indigenous peoples to develop new ways of representing their knowledge, reclaiming cultural heritage, and connecting with their communities. Generative Artificial Intelligence (AI), characterized by the application of technologies like deep learning and neural networks, represents a significant leap in artificial intelligence. While traditional AI systems primarily analyze and learn from input data, generative AI goes a step further by creating new data that is similar, yet distinct. With its reputation for producing new content, insights, and solutions on its own, generative AI holds great potential to reduce prejudice, promote inclusivity, and elevate the voices of Indigenous people in the digital sphere.

Keywords: Indigenous Communities, Artificial Intelligence, Deep Learning, Large Language Models, Digitalization