

AI development requires environmentally sustainable usage

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“Pressing the buttons has gradually become somewhat of a new technological ritual.”

—In “Innovation”; *Wild Wise Weird* (2024)

[WORLDVIEW]

Artificial Intelligence (AI) offers transformative capabilities and significant benefits for humanity. Its integration has revolutionized diverse sectors such as healthcare, business, research, and education, enhancing efficiency, productivity, accuracy, and accessibility to information while addressing complex challenges [1-3]. Beyond these applications, AI also contributes to environmental conservation by promoting sustainable and efficient methodologies, holding substantial potential for supporting nations in transitioning toward cleaner and more sustainable practices [4].

However, the operation of AI systems involves processing queries and maintaining the supporting infrastructure, which requires substantial electricity and water usage. This resource-intensive nature results in significant carbon emissions that exacerbate climate change and raise concerns about water consumption [5]. Environmental advocates have highlighted these issues, emphasizing the need to address AI's ecological footprint [6].



Illustration. Source: <https://thecsr universe.com/articles/india-leader-in-ai-driven-sustainability-initiatives-says-new-report>

A recent article in ScienceNews delves into the ongoing debate surrounding the balance between the costs and advantages of generative AI and examines sustainable pathways for its implementation [5]. Scholars and researchers from various disciplines are working together to assess the true impact of this technology. Most emphasize the need for a more conscientious approach to AI development, aiming to mitigate potential risks while maximizing its benefits. However, each of the approaches provided by the experts entails certain trade-offs. Even the alternative to investigating and promoting those options is comprising a portion of our shared environmental future [5].

While the social benefits of AI often outweigh its trade-offs, what about its environmental impact? To what extent can AI counterbalance the ecological burdens it creates? Can the Earth sustain itself until AI is successfully developed in the era of climate change and environmental degradation?

As Nguyen [7] suggests, humanity must seek wisdom by confronting the foolishness that they are doing in environmental matters. Such wisdom urges us to reevaluate our thoughts, choices, and behaviors to minimize environmental harm and promote ecological sustainability [8]. A critical first step in using AI responsibly for the environment lies in ensuring its effective and efficient utilization.

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