

Peer Review

Review of: "Adverse Environmental and Public Health Effects of Artificial Intelligence: A Narrative Review"

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This review article is timely because nations such as India are setting up data centers without considering their impact on the environment and its people. The article provides a comprehensive framework through a planetary approach, and each section covers the multiple factors involved, citing sufficient (not necessarily exhaustive) research evidence.

My suggestions mainly deal with readability.

Environment. AI is a vast field, but this section is limited to data centers using LLMs that are marketed by large US-based companies. Their databases may ignore or underplay alternatives such as the Chinese LLM, DeepSeek, which uses an architecture that is less resource-intensive, and EU companies that are exploring alternative energy sources. You merely need to point out that the section deals with a specific type of AI implementation.

Public health. This section discusses AI in general applications rather than purely LLM-based data centers. The research findings are a useful consolidation of effects, and you use these findings to defend your argument on the adverse effects of AI. I have two suggestions here.

- a. The categories are not clear. "Vulnerable populations" applies across the board and does not need a separate category; "privacy erosion and surveillance" is a strong claim, whereas the data seems to be about the "covert use of personal data." By "Occupational displacement," do you mean "Job losses"?
- b. How is AI implicated in these effects? I was working with an older version of the paper, and you have done this.

Readability

1. The Introduction

Research and policy papers tend to follow the ABT framework—And, But, Therefore—that provides a context, identifies the problem, and provides evidence. What is the broad context? Is it the exclusive focus on economic benefits? Or the focus on global implications such as climate change that neglects the environmental footprint and health implications?

1. Organizing the information

a. The information is dense, and it does not help that you switch terms and the order of mention.

Figure 1 is complex and has to be read carefully. If you want to stay with it, please follow the same order in the sections that follow. I was scrambling to match sections to the items in Figure 1.

b. You may also want to layer the information. You don't have to give all the information in one shot.

Figure 1 is your conceptual framework, so it does not need numbers. In fact, you could repeat the figure at the end (with the numbers) as a summary.

c. The tables present evidence from the research, but they should be followed by short summaries in case readers don't want to struggle through the tables.

As I said, this is a valuable and timely article that I would use if I wanted to convince policymakers about growing concerns with the current AI universe.

Declarations

Potential competing interests: No potential competing interests to declare.