Mapping changes in lived realities for today's youth

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Problem

AI developments and specifically GenAI with the likes of ChatGPT have skyrocketed demand for land, power and natural resources as data centers need to expand. Digital solutions have impact in physical realities. The promise of technology is always that x will solve y in numerous cases. Nanotechnology, blockchain, big data analysis all claim the same, but we're increasingly living in a world with bigger divides between the poorest and the richest.

Gap

Much research has been done on using waste heat (Terenius, Garraghan, and Harper 2023), the impact on the environment the data centers themselves are having [], its construction phase (Núñez-Morales, Jung, and Golparvar-Fard 2025) and water use (Hogan 2015), but the societal influence of reshaping of physical space is unknown. The magnitude of influence is often counterposed with the inevitable excellence this AI will propel us in. Is this justified?

Hook

In this research I use the hypothesis that the way the digital advances influence physical space through the construction and maintenance of data centers and the resources it requires are bound to have a significant influence in lived realities where these data centers are being built.

Introduction

New ways to use Generative Artifical Intelligence (genAI) for a large scala of applications such as increasing productivity [], berievement (Su 2025) and even criminal behaviour (Ferrara 2024) are coming at us fast. GenAI is rapidly reshaping how we work (Joshi 2025), how we sleep [], and how learn (Perifanou and Economides 2025).

Generative Artifical Intelligence (genAI), a specific form of Artifical Intelligence harnessing the power of Large Language Models to *generate* new output based on vast and widwes data sources, is rapidly transforming our lives. Ranging from reshaping how we work (Joshi 2025) and how learn (Perifanou and Economides 2025), to changing criminal behaviour (Ferrara 2024) and even influencing democratization (Cupać, Schopmans, and Tuncer-Ebetürk 2024)

Life in the age of genAI however, comes at a tremendous physical cost for our planet (Crawford 2021). The physical extraction of metals for chips to enable the machines to run the models [], the power consumption to drive the machines and then again for cooling is outgrowing the planned construction of the power grid at a breakneck speed (Lin et al. 2024). The relation we have to work and what kind of tasks can be performed and automated by machines is rapidly changing.

The impact will be most felt by people where labour and land are cheap and valuable resources, such as metals, are believed to be extracted successfully.

The youth of our world will have to deal with the devastation and hopefully also reap its benefits.

Worldwide the largest population group by 85% in 2050 is estimated to be youth between 15-25. This is the same group that seems optimistic about the use of and the benefits of AI (UNDP 2025) (<— specify with direct citation).

Research Questions

- How do we harness the accelerated changes GenAI is bringing to foster empowerment, freedom and increased human agency as opposed to oppression and machine driven decision-making?

Sub questions

- What physical changes does the coming of new data centers have on lived realities?
- What opportunities does this entail?
- What

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