


Chapter 3

Role of AI in Mitigating Unsustainable Practices

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ABSTRACT

AI presents a paradox in business sustainability, addressing high-end environmental and social challenges while posing risks of algorithmic bias and ethical concerns. Sustainable AI requires balanced, risk-focused regulation that maintains technology neutrality and proportionality. Without oversight, AI can harm the economy, society, and the environment. Strong policies and enforcement are vital for ethical AI management, ensuring it serves as a common good. Integrating AI with blockchain enhances transparency, traceability, and accountability in supply chains, driving

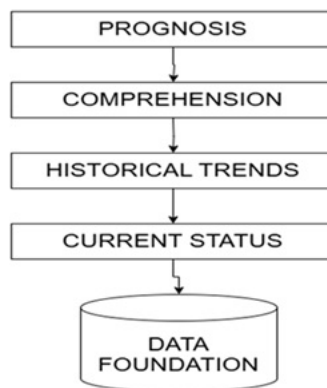
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sustainable industrial transformation and carbon accounting. However, governance must align with environmental interests to mitigate socio-ecological risks. Inclusive policy norms counteract information asymmetry and promote equitable benefits.

INTRODUCTION

AI is emerging as an essential component in almost all sectors, but the impact on the environment is contradictory. Its extensive computing resources increase carbon emissions. Additionally, mining the necessary minerals often exploits marginalized groups. As climate change reaches crisis levels, the incorporation of AI as an infrastructure that increases carbon emissions needs scrutiny. Sustainable AI provides a way to manage environmental justice throughout its life cycle, (Chen et al., 2023). To some degree, these measures will ensure a responsible, ethical approach to Deployed AI in an ecological collapsed world. The intangible environmental impacts of AI are primarily exceptional sustainability threats. While AI is extensively applied in response to climate change, its use and environmental footprint are comparatively less studied. Inadequate disclosure of the environmental impacts of AI impedes quality decision-making, (Onyeaka et al., 2023).

Figure 1. Data foundation of AI



Incorporating AI into infrastructure requires ethical consciousness since what is being created in AI today will determine the future's sustainability. Since AI is being applied aggressively, its sustainability must be a research and development area to counter long-term sustainability risks and enable effective technological development. Unsustainable behavior is widespread across all industries and has

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