

4th INTERNATIONAL CONFERENCE ON
AI ML, DATA SCIENCE AND
ROBOTICS

NOVEMBER 28-29 | PORTO, PORTUGAL



Chukwuka Michael Oforgu

Readrly Limited, UK

AI in Green Financing: Catalyst for Change or Overstated Promise?

Abstract: The escalating imperative to combat climate change has magnified interest in green finance as a transformative strategy for promoting sustainability and reducing carbon emissions. Recent advances in artificial intelligence (AI) have brought forward the potential of leveraging technological innovations to enhance the efficacy of green finance mechanisms. This paper examines whether AI serves as a true catalyst for change in green financing or whether its role has been overstated. We begin by discussing AI's integration into environmental, social, and governance (ESG) frameworks within financial institutions, emphasising how AI aids data extraction, risk assessment, and investment allocation with heightened precision and responsiveness. Further, the study explores AI's capacity to address carbon accounting challenges by utilising natural language processing (NLP) and machine learning to process complex, unstructured data, potentially fostering more transparent and dynamic carbon management systems.

Despite these advantages, the rapid growth in AI model complexity and training demands has underscored substantial environmental costs. The energy requirements for training large-scale models contribute significantly to carbon emissions, paralleling the energy consumption of mid-sized countries. These challenges raise concerns about whether the ecological impact of AI offsets its benefits when applied to green finance, especially considering the intensive computational power required.

This work also evaluates the role of the digital economy as a moderator that enhances the positive impact of AI in green finance. While AI presents a pathway to optimise green finance's reach and efficiency through improved predictive analytics and strategic investment decision-making, the dual pressures of technological advancement and environmental accountability pose critical questions for sustainability-focused innovation.

This paper concludes by asserting that artificial intelligence's impact on green finance is multidimensional, offering considerable potential for sustainability enhancement whilst simultaneously introducing environmental and regulatory obstacles. These challenges demand a nuanced approach that harmonises AI advancements with robust carbon management and energy-efficient methodologies. Such an approach is crucial to ensure that AI serves as a genuine catalyst for sustainable transformation, rather than an overhyped solution.

4th INTERNATIONAL CONFERENCE ON
**AI ML, DATA SCIENCE AND
ROBOTICS**

NOVEMBER 28-29 | PORTO, PORTUGAL

Biography: Chukwuka Oforu is a distinguished data scientist, scholar, and author with deep expertise in machine learning, artificial intelligence, and data science. He holds a bachelor's degree in Biochemistry and a master's degree in data science, which equips him with a unique interdisciplinary approach that seamlessly blends life sciences with advanced analytics. Chukwuka's work is characterised by his ability to distil complex technological concepts into practical, impactful solutions, reflecting his commitment to advancing the practical applications of data-driven innovations across industries.

As an active contributor to the academic community, Chukwuka serves as a reviewer for the respected IGI Global journal, upholding the rigour and quality of published research. His own research and writings focus on the forefront of AI and data analysis, making challenging topics accessible and engaging for professionals and enthusiasts alike. Driven by a passion for education and innovation, Chukwuka strives to bridge the gap between theoretical advancements and real-world application, enriching the understanding and development of these rapidly evolving fields.