

Chapter 14

Innovative Machine Learning Applications for green Finance

Dilip I. Sangotra


Department of Mechanical Engineering, Yeshwantrao Chavan College of Engineering, Nagpur, India

Dhara Vinod Parmar

 <https://orcid.org/0000-0002-4800-4807>


Department of Design and Merchandising, Parul Institute of Design, Parul University, Waghodia, India

Nishant Bhuvanesh Trivedi

 <https://orcid.org/0009-0009-3482-9486>

Department of Animation and Design, Parul Institute of Design, Parul University, Waghodia, India

P. Vidhya Priya


 <https://orcid.org/0000-0002-1421-8743>

Department of Management Studies, Kongu Engineering College, India

T. Pravin

Research and Development, RSP Science Hub, Coimbatore, India

K. Praveenkumar

 <https://orcid.org/0009-0007-1807-6643>

KPR IT, Coimbatore, India

ABSTRACT

This chapter explores the use of machine learning (ML) for recommended systems made for green finance in the financial sector. Green financing aims to promote environmental conscious investments and actions; thus, it is imperative to use cutting edge technology to enhance the decision -making processes. This chapter covers the integration of machine learning algorithms to evaluate large datasets, predict investment opportunities and recommend appropriate green financial solutions. Possible and serious problems when machine learning-based recommended systems

DOI: 10.4018/979-8-3373-1494-5.ch014

are used for green finance. There is also talk of real-world rituals for governments and financial organizations. This study uses cutting edge technical innovations to promote sustainable credit.

INTRODUCTION

Due to the international initiative to reduce environmental change and promote environmental stability, the confluence of money and durability has recently attracted a lot of attention. The subset of durable money called “Green Finance” is related to the allocation of initiatives and the resources of the projects that will improve the environment. These include financial contributions to Energy-efficient construction, sustainable structural, renewable energy room and other green industries. Financial institutions are using cutting edge technology more frequently as machine learning (ML) because the need to address climate change becomes more pressing, so they force more to improve, to improve, assess and provide green financing options (Hansen & Borch, 2022).

In the field of artificial intelligence (AI), machine learning computers gives the ability to learn from data and make judgments or predictions without the need for clear programming. In the context of green finance, the machine learning algorithms are capable of highlighting the possibilities of investing in compatible with durability goals by analyzing the data, including the measurement of financial operations and environmental performance evaluation. These algorithms can get connections and trends that will miss human analysts, giving important information about the potential benefits and drawbacks of green investment opportunities(Lee et al., 2023).

In addition to standard financial analysis, machine learning is being applied in the field of green finance. Financial institutions can use IT complex recommendations to create algorithms that correspond to the risk tolerance, financial goals and investment options in accordance with environmental factors. ML algorithms can produce customized recommendations that maximize financial returns and environmental influence using historical hi -data and current market information. This skill facilitates the incorporation of stability issues in standard financial operations while also improving the efficiency of the decision making (Parisi & Manaog, 2023).

Recommended systems operated by Machine Learning (ML) in Green Finance Space help investors and financial institutions overcome many major obstacles. The difficulty in determining how the environment will affect is such a problem. Artificial intelligence (ML) algorithms are capable of evaluating environmental credentials of the project through the examination of variables, including carbon emissions, resource efficiency and adherence to global durability standards. This

28 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage: www.igi-global.com/chapter/innovative-machine-learning-applications-for-green-finance/405834

Related Content

Generative Model Based Video Shot Boundary Detection for Automated Surveillance

Biswanath Chakraborty, Siddhartha Bhattacharyya and Susanta Chakraborty (2018). *International Journal of Ambient Computing and Intelligence* (pp. 69-95).

www.irma-international.org/article/generative-model-based-video-shot-boundary-detection-for-automated-surveillance/211173

Perceptions of L2 Writing Support Through Generative AI: Reflections From First-Year Education Students

Aitor Garcés-Manzanera (2027). *Encyclopedia of Modern Artificial Intelligence* (pp. 1-22).

www.irma-international.org/chapter/perceptions-of-l2-writing-support-through-generative-ai/407453

Enhancing Quality Education in Engineering and Technology Through AI-Powered Games

N. Kalaivani, P. Vidhya Priya, Yasmeen Sultana, P. Marishkumar, P. Saravanan and M. Suresh (2026). *Examining AI Innovations in Gaming and Entertainment* (pp. 209-244).

www.irma-international.org/chapter/enhancing-quality-education-in-engineering-and-technology-through-ai-powered-games/401167

Talking about NSA Wiretapping and Guantanamo: A Systematic Examination the Language used by Different Networks to Report Post-9/11 Policy Dilemmas Concerning Rights

Linda M. Merola (2016). *International Journal of Signs and Semiotic Systems* (pp. 20-34).

www.irma-international.org/article/talking-about-nsa-wiretapping-and-guantanamo/153598

Visualising Inconsistency and Incompleteness in RDF Gene Expression Data using FCA

Honour Chika Nwagwu (2014). *International Journal of Conceptual Structures and Smart Applications* (pp. 68-82).

www.irma-international.org/article/visualising-inconsistency-and-incompleteness-in-rdf-gene-expression-data-using-fca/120235