MACHINE LEARNING METHODOLOGY IN HEAVY MACHINERY MANAGEMENT: A REVIEW OF THE PRESENT APPLICATION, CHALLENGES AND OPPORTUNITIES

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ABSTRACT

Objective - *The purpose of this paper is to provide a comprehensive review of the applications, challenges, and risks of machine learning in heavy machinery marketing, highlighting its potential to revolutionize the industry.*
Design/methodology/approach - *This review critically evaluates the challenges and prospects of artificial intelligence, particularly machine learning, in heavy machinery management, highlighting the potential benefits, constraints, and risks associated with this complex approach.*
Findings - *This paper provides valuable insights for stakeholders in the heavy machinery industry to help them make informed decisions about incorporating machine learning into their marketing strategies. It is a valuable resource for researchers, practitioners, and industry professionals interested in using machine learning to improve marketing outcomes in the heavy machinery sector.*
Originality - *This paper provides a comprehensive review of the applications, challenges and risks of adopting machine learning, especially in the heavy machinery industry. While machine learning has gained traction in various fields, this paper focuses specifically on its potential impact and implications in heavy machinery marketing.*

Keywords *Application, Challenges, Opportunities, Management, Machine learning, Heavy machinery*

Paper Type *Literature review*

1. INTRODUCTION

Heavy machinery industry is an important sector of the global economy(Berger, 2005; Xiangfeng, 2007; Pisano and Shih, 2012) and its products and services are essential to many industries and businesses(Gann and Salter, 2000).The heavy machinery industry includes a diverse range of products and services, such as earth moving and construction equipment, agricultural machinery, mining equipment, forestry equipment, and industrial machines used in manufacturing and other industries. leveraging machine learning in heavy machinery management offers numerous benefits and companies can gain a competitive edge, reduce costs, and drive overall operational excellence in the industry(Bag *et al.*, 2020).

Present Application: One of the primary applications of machine learning in heavy machinery management is predictive modeling(Alshboul *et al.,* 2022). By analyzing large volumes of data, machine learning algorithms can identify patterns and predict future outcomes(Hung *et al.,* 2018). This can help companies to optimize their marketing campaigns, improve customer engagement, and increase sales. Machine learning algorithms can also be used to develop personalized marketing strategies that target specific customer segments(Javathilaka, 2021).

Other applications of machine learning in heavy machinery management are business marketing strategy. By analyzing customer data, machine learning algorithms can identify different customer groups based on their behavior and preferences(Sharaf *et al.,* 2022). This can help companies to develop targeted marketing campaigns that are more likely to resonate with their audience.

Challenges: Implementing machine learning in heavy machinery marketing comes with its share of challenges. One major hurdle is the quality of data. Heavy machinery marketing relies on various data