Chapter 8
AI's Strategic Role in HR Management

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ABSTRACT

The dynamic nature of today's workplace presents special opportunities as well as challenges for HRM. Natural Language Processing, a branch of artificial intelligence, has the potential to completely transform human resource management (HRM) by means of the use of data-driven decision-making, bias mitigation, employee experience personalization, as well as procedure optimization. The first section of the paper provides an overview of Natural Language Processing application to HRM, with a particular focus on forward-thinking employee turnover prediction, personalized onboarding and training, recruitment automation, in addition to predictive analytics for employee success. There are numerous advantages to incorporating machine learning into HRM, such as objectivity, personalization, automation that reduces costs, and decision-making based on information. With the help of PRISMA technique, secondary data was collected and based upon this data a conceptual framework was established emphasizing the use of NLP in HRM.

1. INTRODUCTION

Human resource management has long held a crucial role in organizations, tasked with the intricate responsibilities of workforce management, talent acquisition, ensuring employee well-being, and enhancing organizational performance. Amidst the dynamic landscape of the modern workplace, human resource management faces a distinct set of challenges and opportunities. The incorporation of machine learning, a subset of artificial intelligence, presents a compelling and transformative avenue. This fusion not only tackles existing challenges but also redefines workforce management fundamentally. This conceptual paper explores the intersection of Natural Language Processing (NLP) and human resource management, delving into how this integration is catalyzing more efficient and effective workforce management practices (Alzoubi, H.M. et.al., 2022) In today's rapidly evolving technological landscape, innovation plays a pivotal role in reshaping organizational operations across various industries. Automation, big data analytics, and artificial intelligence have revolutionized traditional business processes in recent years, and human resource management, being central to these organizations, has undergone a significant transformation. NLP powers many applications that use language, such as text translation, voice recognition, text summarization, and chatbots. You may have used some of these applications yourself, such as voice-operated GPS systems, digital assistants, speech-to-text software, and customer service bots. NLP also helps businesses improve their efficiency, productivity, and performance by simplifying complex tasks that involve language. Natural language processing (NLP) is a field of computer science and a subfield of artificial intelligence that aims to make computers understand human language. NLP uses computational linguistics, which is the study of how language works, and various models based on statistics, machine learning, and deep learning. These technologies allow computers to analyze and process text or voice data, and to grasp their full meaning, including the speaker's or writer's intentions and emotions. The advent of Natural Language Processing has intrigued human resource professionals, promising a new wave of innovation and reshaping established practices. The recent challenges brought about by the COVID-19 pandemic have accelerated the adoption of AI applications in human resource management, particularly in areas such as recruitment, onboarding, and training. It is becoming increasingly clear that the future of HRM practices will be marked by a high degree of digitalization and virtualization, supported by AI technologies. These advancements will help organizations achieve sustainable competitive advantage by enhancing human capital and embracing Industry 4.0

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