

# Reinventing Human Resource Management in the Age of Artificial Intelligence: A Systematic Literature Review on the Transformation of Human–Machine Synergy

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**Background:** The integration of Artificial Intelligence (AI) and Machine Learning (ML) in Human Resource Management (HRM) is recognized as a transformative trend, enhancing data-driven decision-making in areas like talent acquisition and performance analytics. However, a comprehensive and structured mapping of the global research landscape, its thematic evolution, and collaborative networks, particularly in the context of Southeast Asia's plural economies, remains unexplored, creating a rationale for a systematic synthesis

**Purpose:** This study aims to map the intellectual structure and research trends of AI and ML applications in HRM, identifying dominant themes, key contributors, and collaborative patterns to establish a foundational overview and identify future research avenues

**Methodology:** A systematic literature review was conducted following the PRISMA 2020 guidelines. Data was retrieved from the Scopus database, resulting in 62 final articles from an initial 1,566 after rigorous screening. Bibliometric analysis was performed using VOSviewer to visualize co-occurrence networks, country collaborations, and thematic clusters

**Finding:** The findings reveal that artificial intelligence (AI) has reshaped the essence of human resource management (HRM) through three major dimensions: technical enablers, organizational capabilities, and sustainability outcomes. AI acts as a technical enabler that enhances decision-making accuracy and efficiency in HR processes, while organizational capability determines how effectively firms adapt through digital leadership and human–machine collaboration. Moreover, sustainability outcomes emphasize the ethical and human-centered implications of AI adoption, highlighting the need to balance innovation, governance, and employee well-being. Collectively, the review demonstrates that the future of HRM lies in the synergistic integration of human intelligence and machine capability, leading to a more adaptive, ethical, and sustainable model of workforce management

**Limitation:** The study is limited to Scopus-indexed articles and focuses primarily on quantitative bibliometric analysis, suggesting the need for future qualitative investigations on contextual and ethical aspects of AI–HRM integration

**Originality:** The study introduces a novel Human–Machine Synergy Framework that unites technical, organizational, and sustainability perspectives of AI-driven HRM, highlighting ethical and contextual insights often overlooked in Western-centric research

**Keywords:** Artificial Intelligence, Bibliometric Analysis, Human Resource Management, Machine Learning, Systematic Literature Review