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HR 5.0: AI and Data Science Shaping the Future of Work

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Peer Review Information	Abstract
<p><i>Submission: 10 Feb 2026</i></p> <p><i>Revision: 22 Feb 2026</i></p> <p><i>Acceptance: 03 March 2026</i></p> <p>Keywords</p> <p><i>HR 5.0, Artificial Intelligence, Data Science, Human-Centric HR, People Analytics, Future of Work</i></p>	<p>The rapid growth of digital technologies has transformed Human Resource Management (HRM), leading to the emergence of HR 5.0 as a human-centered and ethically grounded approach. Unlike earlier HR models focused mainly on automation and efficiency, HR 5.0 integrates Artificial Intelligence (AI) and Data Science with employee well-being, ethical governance, and sustainable organizational performance. This paper examines the role of AI and data-driven intelligence in enabling HR 5.0 and shaping the future of work. Using a conceptual approach based on recent academic literature and industry practices, the study analyzes AI and data science applications across recruitment, performance management, learning and development, employee engagement, and workforce planning. A Human-Centric HR 5.0 Intelligence Model is proposed, highlighting the integration of intelligent technologies, data analytics, human values, and ethical governance. The study finds that HR 5.0 can support resilient, inclusive, and future-ready organizations when technological capabilities are balanced with human judgment, transparency, and trust.</p>

Introduction

Human Resource Management has evolved in response to technological and workforce changes. While digital HR improved efficiency, it also reduced human interaction. HR 5.0 addresses this gap by combining advanced technologies with empathy, ethics, and sustainability.

Concept and Evolution of HR 5.0

HR 5.0 represents a human-centric evolution of human resources, blending advanced technology (AI, data analytics) with emotional intelligence and employee well-being. It shifts focus from purely digitalizing processes (HR 4.0) to placing employees at the core of business

strategy, ensuring a personalized, meaningful, and sustainable work experience.

HR 5.0 operates as the "people-first" era of HR, acting as a strategic partner that uses technology not to replace, but to empower human capabilities.

Key pillars

- Human-Centricity
- Technological Integration
- Personalization
- Data-Driven Decision Making
- Sustainability & Ethics

Evolution: From Administrative to Human-Centric

HR 5.0 is the result of continuous evolution from operational efficiency to strategic, empathetic management:

- **HR 1.0 (Personnel Admin):** Focus on payroll and basic administration.
- **HR 2.0 (Talent Management):** Introduction of performance management and training.
- **HR 3.0 (Strategic HR):** HR partners with business strategy for competitive advantage.

- **HR 4.0 (Digital HR):** Integration of Big Data, automation, and AI for efficiency.
- **HR 5.0 (Human Experience):** Reintroducing the "human touch" to digital transformation, prioritizing empathy and employee experience.

Key Catalysts of HR 5.0

- Industry 5.0
- Remote/Hybrid Work
- Focus on Purpose

Table 1: Comparison of HR 4.0 and HR 5.0

Dimension	HR 4.0	HR 5.0
Primary Focus	Automation & Efficiency	Human-Centric Intelligence
Technology	Digital Tools	AI & Data Science
Decision-Making	Data-Driven	Ethical & Empathy-Driven
Employee Role	Resource	Strategic Partner
Outcome	Productivity	Sustainability & Well-being

Role of Artificial Intelligence in HR 5.0

AI supports recruitment, performance evaluation, learning personalization, and engagement analysis. In HR 5.0, AI augments decision-making while retaining human oversight.

Artificial Intelligence enhances HR effectiveness by supporting decision-making and personalization across HR functions.

- Talent Acquisition**
- Performance Management**
- Learning and Development**
- Employee Engagement**

Key Applications of Artificial Intelligence in HR 5.0

- Recruitment and hiring
- Onboarding and offboarding
- Workforce planning
- HR chatbots and virtual assistants
- Learning and development
- HR Analytics
- Talent Management
- AI-Based Coaching
- HR Business Partnering

HR 5.0 and the Future of Work

HR 5.0 supports flexible work models, continuous reskilling, and workforce agility in a rapidly changing environment.

Challenges and Ethical Considerations

Key challenges include data privacy, algorithmic bias, and transparency. Ethical governance and human judgment remain critical.

Human-Centric HR 5.0 Intelligence Model

The proposed model integrates intelligent technologies, analytics, human values, and ethics to achieve sustainable outcomes.

Conclusion

HR 5.0 integrates AI and data science with human-centric values to build inclusive and resilient organizations.

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