

# ARTIFICIAL INTELLIGENCE IN HUMAN RESOURCE MANAGEMENT: APPLICATIONS, BENEFITS AND ETHICAL IMPLICATIONS

#### **SUBMITTED TO:**

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#### **SUBMITTED BY:**

Sathyashree Dandinganahalli Shivakumar Student No: 23163488

#### **UNDER THE GUIDANCE OF:**

Dr. John Butler

For the Academic year of 2024-25.

# **Submission of Thesis and Dissertation**

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Management

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# Master Of Arts in Human Resource Management

# **Artificial Intelligence In Human Resource Management: Applications, Benefits And Ethical Implications.**

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This section is a supplement to the main assignment, to be used if AI was used in any capacity in the creation of your assignment; if you have queries about how to do this, please contact your lecturer. For an example of how to fill these sections out, please click here.

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# Acknowledgement

I express my deep appreciation to all people and organizations who helped me finish this research study successfully. I am deeply grateful to my supervisor, Dr. John Butler, for his ongoing support, helpful feedback, and motivational guidance throughout the entire research process. His expert knowledge, together with his thoughtful insights, proved essential for developing the quality and direction of this work.

I want to express my gratitude to the National College of Ireland for providing me with access to academic resources and learning facilities, as well as the opportunity to conduct this research. The availability of research materials, together with library services and educational support, played a crucial role in allowing this dissertation to progress and finish without interruptions.

#### LIST OF ABBREVIATIONS:

- AI Artificial Intelligence
- AIB Allied Irish Banks
- ATS Applicant Tracking System
- CA Case Analysis
- CIPD Chartered Institute of Personnel and Development
- CT Computed Tomography
- CV Curriculum Vitae
- DEI Diversity, Equity and Inclusion
- DL Deep Learning
- DPC Data Protection Commission
- DPIA Data Protection Impact Assessment
- EE Employee Engagement
- EEOC Equal Employment Opportunity Commission
- ERP Enterprise Resource Planning
- EU European Union
- FAQ Frequently Asked Questions
- GDPR General Data Protection Regulation
- HR Human Resources
- HRBP Human Resources Business Partner
- HRIS Human Resources Information System
- HRM Human Resource Management
- HSE Health Service Executive
- IBM International Business Machines Corporation
- ICTU Irish Congress of Trade Unions
- IT Information Technology
- JSTOR Journal Storage
- KPI Key Performance Indicator
- MIS Management Information System
- ML Machine Learning
- NLP Natural Language Processing
- NPS Net Promoter Score
- RBV Resource-Based View
- ROI Return on Investment
- RQ1 Research Question 1
- RQ2 Research Question 2
- RQ3 Research Question 3
- SAP Systems, Applications and Products in Data Processing
- SHRM Strategic Human Resource Management
- SR Self-Regulation
- STARA Smart Technology, Artificial Intelligence, Robotics and Algorithms
- TAM Technology Acceptance Model
- TPM Third Party Management
- UNESCO United Nations Educational, Scientific and Cultural Organization
- WRC Workplace Relations Commission

#### **ABSTRACT:**

The development of Artificial Intelligence (AI) is rapidly changing the face of Human Resource Management (HRM), which is how organizations can acquire, manage, and keep employees. This research proposal proposes the integration of AI technologies in HRM to examine its applications, benefits, and challenges to identify research gaps for future development. These technologies include machine learning algorithms, natural language processing, and predictive analytics employed in the recruitment process, talent management, employee engagement, and workforce planning. These technologies improve efficiency by performing tasks like sorting through resumes and managing payroll, and help in enhancing decision-making through real-time data analysis.

This study looks at how AI-based tools help in enhancing the employee experience, in improving the process of performance appraisal, and in supporting data-driven decisions on workforce management. Additionally, it will attempt to establish how AI can reduce bias in hiring and improve diversity in the workplace. This study looks closely at the ethical issues and practical challenges that come with using AI in HRM. It highlights the need for fair algorithms, responsible handling of employee data, strong AI security measures, and strategies to manage the risk of job displacement. The goal is to make sure AI is used in a way that is transparent and accountable. The research follows a mixed-methods approach, combining case studies, surveys, and interviews with experts to explore how AI is being applied in HRM across different industries.

The insights aim to give clear and useful guidance to HR professionals, policymakers, and organisations on how to benefit from AI while staying true to strong ethical standards. By examining AI's role in HRM, this study seeks to help build organisations that are agile, inclusive, and innovative—while also keeping people at the heart of their operations to boost both performance and employee satisfaction.

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## **Chapter 1 – Introduction**

#### 1.1 Background and Context

Human Resource Management (HRM) operates as an organizational strategic function that attracts talent and develops employees to maintain high levels of engagement and retention for achieving business success. Organisations now use Artificial Intelligence (AI) to transform their human resource management practices which has elevated HRM from administrative work to strategic data-based operations (SAP, 2024). The traditional HRM function included recruitment and employee relations and training and performance management through manual administrative systems. The implementation of machine learning and natural language processing and predictive analytics by HR departments allows them to process extensive workforce data and automate administrative work while producing decision-ready insights (Stone et al., 2015).

The role of HR professionals is transforming into that of a strategic business partner. HR professionals now actively contribute to business success through their work, which extends beyond their traditional duties of application processing and benefits inquiries. The toolset of HR professionals is transforming, with artificial intelligence (AI) emerging as the primary advancement in their digital transformation. The implementation of AI solutions for process efficiency improvement has been explored or implemented by 38% of HR leaders within their organizations.

The technology of artificial intelligence (AI) enables machines to perform human-like reasoning and capabilities that include autonomous decision-making. AI learns to recognize speech and spot patterns and trends through the assimilation of vast amounts of training data, which enables it to solve problems proactively and predict future occurrences.

The application of AI in human resource management (HRM) involves using multiple automated tools to perform structured and process-oriented duties and routine tasks. The implementation of AI transforms the entire process of employee attraction, hiring, retention, and development.

Research shows that AI governance stands as a primary barrier that prevents organizations and HR professionals from adopting AI solutions. The survey results showed that 67% of organizations lacked any established governance model. The majority of these organizations focused on developing governance models. At the

same time, some adopted a more passive approach, either treating AI as a standard technology acquisition or relying on external governance from regional or federal levels.

AI stands apart from other technologies because it demands its distinctive management framework. Businesses need a specific AI governance model to achieve responsible and ethical AI development, selection, deployment, and usage, as explained in the following section. The good news is that guidance is available. The detailed report on AI adoption identifies 10 of the top interventions to consider when encouraging a workforce to start using new AI tools.

The last twenty years have seen Human Resource Management transition from its administrative roots into a strategic partnership that generates direct competitive advantages. The transformation of HRM into a strategic partner has been driven by technological innovations, particularly those related to Artificial Intelligence (AI), according to (Islam, and Tamzid, 2023).

AI systems possess the ability to execute tasks that need human intelligence for decision-making and pattern recognition, and natural language understanding (Bujold, et al., 2024). AI applications in HRM include automated candidate screening and predictive analytics for workforce planning, as well as personalized learning and development programs, along with chatbots for employee queries and tools for analysing engagement (Murugesan, et al., 2023). Unilever achieved a significant reduction in hiring timelines from four months to four weeks through AI recruitment while saving 100,000 hours of annual recruiter time, according to (Hern., 2019).

Research has established numerous advantages of AI implementation in HRM systems. Organizations experience better operational efficiency and reduced costs while achieving enhanced data precision and improved staff satisfaction (Rosário, 2025). AI-powered recruitment platforms use their technology to scan thousands of CVs within seconds, which decreases manual screening workloads and accelerates hiring decisions (Wikipedia, 2025). The use of AI to standardize evaluations helps minimize recruitment bias, yet real-world applications show more complexity.

AI technology provides substantial opportunities, yet generates multiple ethical problems. The implementation of AI systems in recruitment tools has resulted in algorithmic bias because these systems adapt to unfair decision-making from biased historical data (Wikipedia, 2025). Amazon's AI recruitment system became defunct after researchers discovered it discriminated against female candidates during the application process (Dastin, 2018). The implementation of AI tools that track employee activities or forecast employee departure risks faces significant privacy challenges because these systems may be viewed as invasive, thus damaging employee trust (Sadeghi, 2024).

Policymakers and organisations are beginning to respond. The European Union's proposed AI Act categorises recruitment AI as "high risk", requiring transparency, fair assessments, and accountability (European Commission, 2024). Similarly, UNESCO's AI Ethics Recommendation calls for human oversight, explainability, and protection of human rights (UNESCO, 2022).

This duality substantial operational benefits versus significant ethical risks creates the need for a balanced, evidence-based exploration of AI's role in HRM. This dissertation addresses that need by critically examining applications, benefits, and ethical implications.

#### 1.2 Research Problem

The current research about AI in HRM studies either technical operational aspects or ethical matters without exploring their relationship (Chen, et al., 2023). The current state of knowledge fails to explain how organizations should implement AI responsibly to achieve maximum benefits.

AI tools deliver operational advantages through improved recruitment processes and individualized learning development, and real-time employee analytics (Murugesan, et al., 2023; Rosário, 2025). Predictive analytics helps organizations predict employee departures, which allows them to develop proactive retention plans (Bujold, et al., 2024).

However, ethical risks are significant. Systemic discrimination becomes more entrenched through algorithmic bias while privacy breaches damage employee trust,

and insufficient transparency makes it harder to hold entities accountable (Wikipedia, 2025; Sadeghi, 2024).

Regulatory compliance adds further complexity. The EU AI Act, together with GDPR, states detailed guidelines for data processing transparency and employee rights (European Commission, 2024). The technical limitations of HR teams regarding AI implementation create a risk of non-compliance and damage to their reputation because they lack the necessary expertise to follow regulatory requirements.

Therefore, the core research can be stated as:

Organizations need to understand the deployment methods of AI in HRM that combine operational advantages with ethical risk management and compliance, along with transparency standards.

#### 1.3 Aim and Objectives

#### Aim:

Assessing AI applications in Human Resource Management involves examining their benefits and ethical considerations to provide well-grounded recommendations for responsible implementation.

#### **Objectives:**

- 1. To identify key applications of AI in HRM, supported by real-world organisational examples.
- 2. To analyze the organizational benefits of AI integration in HRM, including efficiency, decision quality, and employee experience.
- 3. To investigate ethical challenges such as bias, privacy, and transparency associated with AI use in HRM.
- 4. To evaluate existing frameworks, regulations, and best practices for ethical AI implementation in HRM.
- 5. To recommend strategies for HR professionals to balance AI's advantages with ethical safeguards.

#### 1.4 Research Questions

The research questions of this dissertation consist of three main parts:

**RQ1:** What are the primary applications of Artificial Intelligence in Human Resource

Management, and how are they transforming traditional HR functions?

**RQ2:** What organisational benefits arise from integrating AI into HRM?

**RQ3:** What ethical implications particularly concerning fairness, transparency, and privacy arise from AI in HRM, and how can they be mitigated?

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#### 1.5 Dissertation Outline

#### **Chapter One: Introduction**

The chapter establishes the research context by explaining how Artificial Intelligence impacts Human Resource Management while identifying the necessity to assess its advantages and moral dilemmas. The research problem receives definition through the presentation of the research aim and objectives, and research questions which direct the investigation. The discussion establishes the topic's position among current organizational and technological developments. The dissertation structure receives an overview in the final section of this chapter.

#### **Chapter Two: Literature Review**

The literature review evaluates academic and industry sources about AI applications in HRM through an analysis of recruitment and performance management, and employee engagement. The literature review demonstrates operational advantages, which include efficiency and enhanced decision-making capabilities. The review provides a comprehensive analysis of ethical issues, which include bias and privacy, and transparency problems. The research identifies existing knowledge gaps to demonstrate its original contribution.

#### **Chapter Three: Research Methodology**

The research design section of this chapter explains the chosen methodology and justifies the data collection methods employed in the study. The analysis uses secondary data alongside scholarly literature and case studies. The chapter addresses ethical matters, including GDPR compliance and academic integrity standards. The research methodology has certain limitations, which are recognized in this study.

#### **Chapter Four: Analysis and Findings**

The research findings follow a systematic structure that directly answers each research inquiry. The analysis incorporates evidence from literature and case studies to show how AI applies to HR practice and its measurable advantages and ethical challenges. The analysis compares various contexts to establish a detailed

understanding. The analysis maintains an objective, factual approach that directly supports the study's objectives.

#### **Chapter Five: Discussion**

The chapter analyzes research results through existing literature to identify matching points and conflicting points, and new developments. The analysis evaluates the ethical implications of AI adoption for HR professionals. The chapter examines organizational and policy-based factors that help organizations use AI responsibly. The discussion connects abstract theoretical ideas to real-world operational needs.

#### **Chapter Six: Conclusion and Recommendations**

The final chapter combines essential findings to answer the research questions directly. The research provides actionable recommendations that help HR practitioners achieve AI advantages while reducing ethical challenges. The study acknowledges its limitations to uphold academic transparency. Future research should focus on expanding the investigation of this topic.

# **Chapter 2 – Literature Review**

#### 2.1 Overview of Artificial Intelligence in HRM

The implementation of Artificial Intelligence (AI) in Human Resource Management (HRM) involves using advanced computational tools, including machine learning and natural language processing, and predictive analytics, to improve and automate traditional HR functions (Bujold et al., 2024). The conventional role of HRM has focused on talent acquisition and development, and retention alongside administrative and strategic duties (Armstrong and Taylor, 2020). The implementation of AI brings a significant transformation to this field because data-driven algorithms now possess the ability to process intricate information, which guides human decisions or substitutes them in fundamental HR operations (Murugesan et al., 2023).

The Technology Acceptance Model (TAM), which Davis (1989) developed, provides essential insights into how HRM professionals accept AI systems. The fundamental principle of TAM explains how people decide to accept or reject new technology systems. The model focuses on two essential perceptions, which include the extent to which a technology enhances job performance (perceived usefulness) and the simplicity of operating the technology (perceived ease of use). The HRM context shows that an AI-powered applicant tracking system (ATS) demonstrates its usefulness through process streamlining, and its analytics dashboard demonstrates user-friendliness through intuitive design. The model provides valuable insights about HR professionals' first reactions to AI tools, although it does not consider organizational culture as a factor.

The Resource-Based View (RBV) of the firm, which Barney (1991) established, provides a theoretical framework to study AI effects on HRM. According to RBV, organisations can establish enduring competitive advantages through the development and protection of resources that possess value, rarity, imitability, challenges, and non-substitutability. Human talent stands as one of the most essential resources according to traditional views. The implementation of AI in HRM enhances this advantage through better management of recruitment processes, talent development, and retention practices. Predictive analytics enables organisations to detect promising leaders among their workforce at early stages, which allows them to develop unique

development programs that competitors find difficult to duplicate. Through this approach, AI functions as a strategic asset that boosts an organisation's most valuable resource, which is its human capital.

The implementation of AI in HRM manifests through multiple technological tools that boost decision quality and operational efficiency. Recruitment platforms utilize advanced algorithms to evaluate thousands of applications during a short period. Sentiment analysis tools enable organizations to measure employee morale through the assessment of their communications. Adaptive learning systems use predictive analytics to create personalized training programs for individual employees. These innovations transform HRM from its traditional reactive approach to a proactive model that uses data-driven insights for early intervention (Marler and Boudreau, 2017).

The implementation of these technologies presents various obstacles to organizations. The successful deployment of these technologies requires HR professionals to acquire abilities for data interpretation and algorithmic decision-making, as well as ethical technology implementation. The digital transformation requires HR practitioners to combine their traditional people management skills with strong technological abilities to effectively handle human and machine-based processes (Bondarouk et al., 2017).

#### **Summary:**

The implementation of AI in HRM brings substantial changes to the field by enabling automated processes, predictive capabilities, and strategic alignment. The Technology Acceptance Model and Resource-Based View provide practical frameworks to analyze both the adoption process and the strategic value of AI. The new HR paradigm combines technology with human capital in a synergistic relationship, but requires HR professionals to develop new capabilities and address ethical challenges.

#### 2.2 Evolution of Trends in AI Adoption

The implementation of AI in HRM represents a development within the broader evolution of technological advancements. The HR systems of the 1970s and 1980s mainly performed administrative tasks by converting payroll and attendance records into digital formats (DeSanctis, G., 1986). The digitization phase established the foundation for e-HRM systems, which emerged during the 1990s and early 2000s

through web-based HR systems and employee self-service portals and global data standardization (Bondarouk, T. and Ruël, H., 2009).

The transition from e-HRM to AI-enabled HRM began in the mid-2010s, as advancements in big data analytics and machine learning enabled predictive and prescriptive HR applications (Upadhyay, A.K., & Khandelwal, K., 2018). The evolution of Applicant Tracking Systems (ATS) progressed from keyword-based screening to algorithmic ranking models, which evaluate candidate suitability through experience and skill assessment and cultural fit prediction. AI adoption progressed from recruitment to performance management, learning and development, and employee engagement analytics during the late 2010s (Chamorro-Premuzic, T., et al., 2016).

Three significant trends have emerged in AI adoption for HRM since 2020.:

- 1. **Mainstreaming of AI in Recruitment and Selection**: AI technology serves as an initial screening tool and interview scheduler for numerous big organizations. AI chatbots perform the first stage of candidate interactions, while video analysis tools help firms evaluate micro-expressions, word choice, and tone (Bhatnagar, J., and Ghosh, P., 2022).
- 2. **Integration of Generative AI**: Generative AI tools are increasingly used to create customised job descriptions, generate training content, and answer employee queries in natural language, enhancing speed and accessibility (Gartner, 2025)..
- 3. **Employee-Led AI Adoption**: Research indicates that numerous employees secretly use generative AI tools at work because they want to enhance their productivity without seeking approval from their managers or IT department (Investopedia,2025).

The adoption rates differ between various industries. Technology firms lead the way because their innovation-focused cultures combine with substantial financial resources. The adoption of AI by the healthcare and finance sectors remains cautious because they need to follow privacy and fairness standards.

The implementation of AI in HRM follows the principles of Diffusion of Innovations theory (Rogers, E.M., 2003), which describes how new ideas and technologies

become widespread. The initial phase of AI tool adoption begins with HR innovators and early adopters, who test these tools in separate projects. Positive results lead to broader implementation among the early majority, followed by widespread adoption. The adoption process of laggards tends to be slow because they operate in smaller organizations with limited resources.

#### **Summary:**

The adoption of AI in HRM has progressed through different technological periods, with rapid growth starting in 2020. The adoption of AI has become widespread in specific functions, such as recruitment, but organizations continue to show different levels of implementation. The main obstacle exists in transitioning from isolated experimental use to established, well-regulated integration.

#### 2.3 Applications of AI in HR Functions

The multiple functional areas of HRM demonstrate AI versatility through automation, enhanced data analysis, and predictive capabilities.

#### **Recruitment and Selection:**

The application of AI in HRM shows the most advancement in recruitment processes. The modern Applicant Tracking Systems (ATS) employ machine learning algorithms to evaluate candidates through their CVs and social media profiles, and online portfolios (Upadhyay, A.K. and Khandelwal, K., 2018). Unilever implemented an AI-based graduate recruitment system which combined online games with AI-analyzed video interviews and data-based candidate evaluation to cut hiring duration from four months to four weeks, thus freeing up more than 100,000 recruiter hours each year (Hern, A., 2019). The video interview platform HireVue applies natural language processing to evaluate speech patterns and facial expressions, which generates standardized assessment results (Chamorro-Premuzic, T., et al., 2016). These systems enhance operational efficiency, but critics warn that improper oversight could lead to biased outcomes.

#### **Performance Management**

AI systems track performance metrics in real time while using predictive models to manage talent. Predictive analytics helps organizations detect departing employees in advance so they can implement preventive retention measures (Pillai, R., and

Sivathanu, B., 2020). Performance feedback systems collect data from multiple sources, including peer reviews and project outcomes, and customer satisfaction scores, to provide a complete understanding of employee contributions.

#### **Learning and Development (L&D)**

The AI technology in adaptive learning platforms delivers personalized training through content adjustments that respond to learner progress and engagement levels (Mohanty, S., and Mohanty, P.K., 2022). The systems provide learning pathway suggestions that match both personal career objectives and business skill requirements. The AI-based learning platform "Your Learning" from IBM evaluates employee skills to suggest specific courses that address detected knowledge deficits (LaMoreaux, 2024).

#### **Employee Engagement and Well-being**

AI sentiment analysis tools analyze open-ended survey responses, emails, and chat messages to identify employee mood and engagement patterns (Bhatnagar, J. and Ghosh, P., 2022). AI chatbots provide immediate HR assistance by answering standard inquiries and directing staff to available resources, thereby enhancing service accessibility. AI platforms utilize their technology to recommend health programs, stress management tools, and burnout detection capabilities for wellbeing applications.

#### **Workforce Planning**

The use of predictive workforce analytics enables organizations to predict their staffing requirements through analysis of business expansion and market dynamics, and employee movement patterns (Marler, J.H., and Boudreau, J.W., 2017). The obtained insights enable HR leaders to create strategic recruitment and training plans that prevent skill shortages.

#### **Critical Reflections**

The growing applications of AI in HRM require data quality and algorithm transparency, and user acceptance to achieve success. The excessive use of automated HR systems threatens to eliminate the human aspects of HRM by reducing the ability to make contextual decisions and build relationships, and exercise ethical judgment (Microsoft Aether Research, 2022).

#### 2.4 Organisational Benefits of AI in HRM

The advantages of Artificial Intelligence (AI) in Human Resource Management (HRM) exist at three interconnected levels. These include operational efficiency and accuracy improvements, strategic advantages for talent management and capability development, and competitive advantage and experiential benefits for candidates, employees, and managers. The benefits emerge when organizations implement suitable technologies with solid data foundations and process redesigns and people-focused change management strategies (Marler, J.H. and Boudreau, J.W., 2017; Bondarouk, T. et al., 2017).

#### Operational efficiency and cycle-time reduction.

AI systems have proven their ability to perform high-volume automated rules-based work, including CV parsing, interview scheduling, and policy Q&A through chatbots, as well as standardised compliance reporting (Upadhyay, A.K. and Khandelwal, K., 2018). The recruitment process becomes faster through algorithmic pre-screening, which quickly reduces large candidate pools, and scheduling assistants eliminate coordination challenges to shorten the time needed to reach the shortlist and offer stages. Unilever's graduate hiring transformation serves as a well-known example that implemented AI technology to replace multiple manual steps and achieved a cycle reduction from months to weeks while saving both recruiter and candidate time (Hern, A., 2019). The implementation of automated systems produces similar efficiency improvements in onboarding through document verification and provisioning and policy administration through conversational agents and routine payroll or benefits adjustments, which benefit from machine-enforced rules to reduce errors (Armstrong, M., and Taylor, S., 2020).

#### Quality, consistency, and decision support.

AI technology provides additional benefits to HR decision reliability and consistency beyond its speed capabilities. Machine-learning classifiers and predictive models help triage candidate pipelines and flag patterns in performance, engagement, or attrition risk that are not readily visible to human reviewers (Marler, J.H., and Boudreau, J.W., 2017). AI-supported dashboards in performance enablement systems combine data from multiple sources, including outcomes and peer feedback, and project metrics, to deliver timely signals to managers about coaching needs or workload adjustments

(Pillai, R., and Sivathanu, B., 2020). The system functions as decision support instead of decision replacement because well-designed workflows maintain human oversight during critical points that require context understanding, equity, and organizational value considerations (Bujold, A., et al., 2024).

#### Strategic alignment and the Resource-Based View (RBV).

The Resource-Based View (RBV) theory states that sustained advantage emerges when firms combine valuable, rare, inimitable, and non-substitutable resources (Barney, J., 1991). The orchestration of AI strengthens this process through two distinct methods. The identification of scarce talent becomes more effective because AI reveals concealed abilities and capabilities, which expand and enrich internal talent pools (Verma, Ashutosh, 2024). The deployment of talent becomes more efficient through AI because it enables better and faster matching of people to available projects, roles, and learning pathways. Organizations that implement such systems within workforce planning and internal mobility functions can achieve better productivity and retention benefits, which rivals find challenging to duplicate because the underlying data assets (e.g., proprietary skills graphs) are path-dependent and organization-specific (Marler, J.H. and Boudreau, J.W., 2017).

#### Employee and candidate experience.

AI's key benefit of personalization improves user experience across different interaction points. Learning and development platforms use adaptive technology to recommend content tailored to employee roles, proficiency levels, and career goals, resulting in higher relevance and completion rates. Sentiment analytics help HR professionals identify potential issues early, such as workload spikes or perceptions of unfairness, so they can take targeted steps before problems become severe (Bhatnagar, J., and Ghosh, P., 2022). Candidates receive quicker responses, clearer status updates, and consistent assessment criteria. This enhanced experience boosts employer branding, increases candidate acceptance rates, and fosters stronger employee engagement (Armstrong, M., and Taylor, S., 2020).

### Cost optimisation and reallocation of HR capacity.

The implementation of cycle-time reductions together with lower manual rework and improved matching quality results in measurable cost savings according to Upadhyay and Khandelwal (2018) and Hern (2019). Organizations use their cost savings to fund

strategic HR initiatives, which include workforce planning, leadership programs, and well-being support. The HR function transforms its activities from administrative work to advisory and analytical roles, which enhances business perception of HR value (Bondarouk, T., et al., 2017).

#### Agility and resilience in dynamic environments.

AI systems enable organizations to create scenario models and perform "what-if" planning. Leaders use predictive analytics to model staffing requirements, evaluate succession plans, and identify essential roles during economic shocks and rapid growth phases. Generative AI tools under proper governance enable organizations to speed up content generation for tasks like job advert drafting and learning outline development, which allows leaders to dedicate their time to stakeholder engagement and change leadership activities (Carnevale, J.B. and Hatak, I., 2020)

#### Prerequisites and mediating factors.

The advantages of AI depend on data readiness (quality, completeness, lineage), process clarity (well-defined inputs/outputs), and user adoption (perceived usefulness and ease, per TAM: Davis, F.D., 1989). Models underperform or embed historical biases (Raghavan, M., et al., 2020) when data is insufficiently rich and representative. Similarly, gains are limited if legacy processes are inefficiently "lifted and shifted" into AI wrappers rather than re-designed (Bondarouk, T., and Ruël, H., 2009). Finally, the social system around the tools—training, change narratives, and feedback channels—strongly mediates value realisation (Rogers, E.M., 2003; Pillai, R. and Sivathanu, B., 2020).

#### Measurement and ROI capture.

The achievement of benefits needs strong measurement systems. The measurement of leading indicators, such as time-to-shortlist and candidate NPS and learning relevance scores, and lagging indicators, such as quality-of-hire proxies, retention of critical roles, and internal mobility rates, should be defined in advance and tracked over time (Marler, J.H., and Boudreau, J.W., 2017). The combination of quantitative dashboards with qualitative manager and employee feedback through mixed-methods evaluation enables the identification of AI improvements while excluding confounding factors. It reveals unintended consequences at an early stage (Bujold, A., et al., 2024).

#### **Summary:**

The implementation of AI technology enables HR departments to enhance their operational speed and consistency while delivering personalized solutions that improve strategic talent alignment and cost management. The value of AI implementation depends on several key factors, including the quality of data, process redesign, governance, and adoption. Organizations that approach AI as a sociotechnical change instead of treating it as a procurement exercise will achieve sustainable benefits that align with RBV logics of competitive advantage (Barney, J., 1991; Marler, J.H. and Boudreau, J.W., 2017).

#### 2.5 Ethical Implications and Challenges

The ethical landscape of AI in HRM remains complex because employment choices directly impact people's ability to earn a living, their dignity, and their right to equal opportunities. The main challenge areas bias/fairness, transparency/explainability, privacy/data protection, regulation/compliance, accountability/human oversight, and employee acceptance are interdependent and require technical, legal, and organisational responses (Wachter, S., et al., 2017; Jobin, A., et al., 2019; European Commission, 2024).

#### Algorithmic bias and distributive fairness.

The model lifecycle becomes vulnerable to bias through four entry points, which include data bias from under- or mis-represented groups in training data and label bias from historical performance ratings that reflect human biases and feature bias from proxy variables that encode protected characteristics and deployment bias from using a model outside its validated context (Raghavan et al., 2020). The Amazon experimental hiring tool failed to detect gender bias until its abandonment after demonstrating gender-based disadvantage, according to Dastin (2018). The recruitment process becomes biased through sourcing, screening, and scoring, which affects performance ratings and promotion velocity, and determines learning opportunities influenced by bias. Small model skews in HR decisions create large distributive effects because these decisions accumulate over time (Raghavan et al., 2020).

#### Mitigation strategies and their limits.

The mitigation strategies include data diversification and de-biasing techniques, fairness-aware training objectives, and post-hoc auditing, but trade-offs are common. Different fairness definitions (e.g., demographic parity vs. equal opportunity) can conflict, and optimising one may harm another (Wachter, S., et al., 2017). Technical fixes cannot substitute for institutional measures such as bias-aware process design, diverse hiring panels, and escalation routes when automated recommendations appear inconsistent with equity goals (Bujold, A., et al., 2024).

#### Transparency, explainability, and meaningful information.

The inability to view decision-making processes within AI systems creates challenges for people to trust or question these systems. The HR department needs to provide transparent explanations that employees can understand because this practice helps organizations fulfill ethical standards and maintain legal compliance (Wachter, S., et al., 2017). The implementation of model cards, data sheets, and local explanations provides ways to enhance transparency in AI systems. The explanations need to be modified according to the target audience, which includes developers, HR staff, and employees. The use of simpler AI models in sensitive HR situations becomes preferable because they provide easier explanations, even though they deliver slightly less accurate results (Jobin, A., et al., 2019).

#### Privacy, proportionality, and surveillance risks.

The HRM AI systems handle sensitive personal data, along with behavioral signals such as keystrokes, email metadata, and meeting patterns. The existence of lawful bases does not eliminate the need to follow proportionality principles and employee privacy expectations. The practice of excessive monitoring creates adverse effects that include speech suppression, psychological safety deterioration, and well-being damage (Carnevale, J.B., and Hatak, I., 2020). The GDPR requires organizations to define precise boundaries for data minimization, purpose limitation, and storage limitation, while DPIAs serve as a necessary step for high-risk processing (European Commission, 2024). The implementation of privacy-by-design techniques requires pseudonymisation, access controls, and retention schedules to be integrated into HR AI pipelines during their initial development phase instead of being added later (Wachter, S., et al., 2017).

#### Regulatory landscape and compliance by design.

The EU Artificial Intelligence Act proposal identifies AI systems used for recruitment and worker management, as well as access to employment, as high-risk. This requires organizations to implement risk management, high-quality data governance, technical documentation, human oversight, robustness, and post-market monitoring (European Commission, 2024). Organizations worldwide experience increasing pressure to maintain transparency and fairness in automated employment decision-making processes. Organizations must integrate these obligations into their procurement criteria, vendor due diligence processes, and internal assurance functions (Bujold, A., et al., 2024).

#### Accountability, human oversight, and role design.

The ethical frameworks require accountability through identification of responsible parties and human oversight to enable human intervention and escalation of concerns (Jobin, A., et al., 2019). The practical implementation requires organizations to establish specific roles for model owners, data stewards, and HR decision-makers, as well as an independent review mechanism such as an AI ethics committee that can stop or change deployments. The "Human-in-the-loop" process should involve meaningful context-based review instead of superficial rubber-stamping (Bujold, A, et al., 2024).

#### Worker voice, inclusion, and acceptance.

The durability of adoption increases when employees grasp the fundamental purposes, boundaries, and protective measures of AI systems that impact their work (Pillai, R., and Sivathanu, B., 2020). The Technology Acceptance Model (Davis, 1989) requires additional factors such as fairness, transparency, and control perceptions to explain acceptance in employment contexts where power imbalances exist. The implementation of representative employee involvement in procurement pilots combined with plain-language tool summaries and clear contestation procedures will enhance trust levels. HR practitioners need training to explain recommendations while avoiding excessive claims about model certainty (Armstrong, M., and Taylor, S., 2020).

1. Policy – establishing guiding principles that promote fairness, transparency, and human oversight.

- 2. Processes applying formal procedures such as Data Protection Impact Assessments (DPIAs), algorithmic risk assessments, and model risk classification systems.
- 3. Artefacts producing and maintaining documentation, including model cards, data sheets, and audit logs, to support transparency and traceability.
- 4. People designating responsible individuals and creating cross-functional review boards to oversee compliance and decision-making.
- 5. Controls putting in place mechanisms to detect model drift, define retraining triggers, and activate kill switches where necessary.

Additionally, vendor relationships are managed through contractual agreements that outline audit access, performance benchmarks, update commitments, and protocols for incident reporting (Jobin et al., 2019; Bujold et al., 2024).

#### Edge cases: generative AI and content provenance.

Generative AI poses three significant risks: hallucinations (confidently wrong outputs), copyright and licensing issues in L&D content reuse, and prompt injection or data leakage when connected to internal systems. The implementation of retrieval-augmented generation, content provenance checks, and restricted data scopes with strong access controls serves as guardrails according to Gartner (2025). HR should handle generative outputs as draft materials that need human verification, especially for sensitive communications and policy artefacts.

#### The limits of technical solutions and the need for culture.

The implementation of technical measures helps decrease risks but does not substitute for an ethical organizational culture. Leadership signals (why the organisation uses AI and what it will not use it for), non-retaliation for raising concerns, and auditing that leads to visible adjustments all contribute to legitimacy. Ethical AI in HRM is an organisational capability built over time, not a product to be purchased (Bujold, A., et al., 2024).

#### **Summary**

The ethical problems in HR AI exist at multiple levels, encompassing bias, opacity, privacy, and accountability issues. The solution requires technical methods (fairness-aware modelling, explainability) and legal compliance (DPIAs, high-risk obligations) and organizational governance (clear roles, worker voice, meaningful oversight). The

adoption process becomes most sustainable when employees view AI as an assistance tool rather than a controlling force, and leaders show that fairness and dignity remain absolute priorities.

## **Chapter 3 – Research Methodology**

#### 3.1 Research Approach

Research exists to discover answers to questions, while our research approach depends on the nature of information we seek (Creswell, and Creswell, 2018). Three main research approaches exist, which include quantitative research, qualitative research, and mixed-methods research.

- QUANTITATIVE: The core foundation of quantitative research relies on numerical data and measurable statistics. The research method includes surveys, experiments, and statistical data analysis. The dissertation would determine AI adoption rates in Irish HR processes through questionnaire distribution to HR managers, followed by statistical analysis of the results (Bryman, 2016).
- **QUALITATIVE:** The primary focus of qualitative research is on words, along with meanings and experiences, instead of numerical data. The research method uses case studies, interviews, documents, and reports to understand the reasons behind events (Silverman, 2020).
- MIXED: The combination of numbers with detailed descriptions in mixed-methods research produces a more complete understanding (Saunders, Lewis, and Thornhill, 2019).

The qualitative research method provides the best approach for this dissertation. The research investigates both the current applications of Artificial Intelligence in Human Resource Management and its advantages and moral implications. The research topics require deep descriptive analysis along with expert insights and practical examples instead of statistical data (Gill, and Johnson, 2010).

The research design will be secondary because it depends solely on existing information without collecting new data. The decision to use existing information stems from two essential factors:

1. Academic research, together with professional reports from the CIPD, consulting firms, and technology providers, has generated a substantial amount of literature about AI in HRM (CIPD, 2023).

2. The existing sources provide a more efficient option for review and analysis because of time and resource limitations.

The research methodology follows interpretivist principles because it seeks to understand meanings and experiences instead of measuring variables (Bryman, 2016). The research focuses on understanding the reasons for organizational adoption of AI in HRM, as well as the benefits and challenges experienced, rather than creating statistical data.

The research design combines qualitative methods with secondary data analysis and interpretivist principles to develop an extensive understanding of AI's impact on HRM through a thorough evaluation of existing research (Saunders, Lewis, and Thornhill, 2019).

#### 3.2 Data Sources and Selection

The entire information base of this dissertation consists of existing secondary research materials. The research method involves studying existing materials that others have published or recorded instead of conducting new data collection through interviews or surveys (Johnston, 2017).

#### **Types of sources used:**

The primary sources for this dissertation are:

- Academic journal articles: The sources deliver peer-reviewed research findings about AI applications in HRM, together with their advantages and moral challenges. The International Journal of Human Resource Management and Human Resource Management Review publish detailed research studies that examine both worldwide and local perspectives (Marler, J.H., and Boudreau, J.W., 2017).
- Industry reports: Major consultancies, including Deloitte, report that 75% of HR teams are currently investigating or testing AI adoption according to their industry reports (Deloitte, 2025).
- Professional body publications: The Chartered Institute of Personnel and Development (CIPD) publishes periodic reports and guidance about AI and HR practices, which are especially important for the Irish and UK regions (CIPD, 2023).

- Government and policy documents: The European Commission publishes
   AI regulation materials that establish legal and ethical standards for AI applications in HR (European Commission, 2024).
- Case studies: The following examples from IBM, Unilever, and PwC demonstrate how AI tools have been used in HR settings. These provide practical, real-world perspectives (Hern, A., 2019).

#### **Selection criteria:**

Not every source is suitable for inclusion. The research credibility and relevance were maintained by selecting sources based on the following criteria:

- 1. **Relevance to the topic:** The source should concentrate on AI in HRM or related topics, including automation in recruitment, AI in learning and development, and AI ethics.
- 2. **Credibility:** Priority is given to peer-reviewed journals, respected professional bodies, and well-known industry research firms.
- 3. **Recency:** Since AI technology changes rapidly, most sources are from the last five to seven years. Older sources are only included if they are foundational to understanding the topic (e.g., original definitions of AI or early HR technology research).
- 4. **Geographical scope:** While global sources are used, special attention is paid to studies and reports that include examples from Ireland, the UK, and Europe.

#### How sources were found:

The research process began with database searches of Google Scholar, JSTOR, and ScienceDirect using the keywords "Artificial Intelligence in HRM," "AI recruitment," "AI ethics in HR," and "AI benefits in human resources." The search results were restricted to recent publications through filtering before abstracts were reviewed for relevance to download full texts (Saunders, M., Lewis, P., and Thornhill, A., 2019).

#### Why this matters:

The selection of appropriate sources guarantees that research findings are based on dependable information. Media articles in AI research present a high risk of finding exaggerated claims. The methodology prevents biased results by using reliable sources that present both positive and negative aspects of AI in HRM.

#### 3.3 Analysis Methods

The following step involved selecting appropriate sources for analysis. The research method used to interpret data is known as the analysis method in research terminology. The qualitative secondary research approach of this dissertation requires pattern and theme identification from written material instead of statistical testing (Braun, V., and Clarke, V., 2006).

#### Why thematic analysis?

The research method selected for this study is thematic analysis. The researcher uses thematic analysis as a typical qualitative research method to read all collected material before identifying key points, which are then grouped into themes that answer research questions. The repeated ideas such as "efficiency gains", "improved decision-making", "bias in algorithms", or "employee trust in AI" emerge during the review of sources. The repeated ideas form the basis for the themes. (Braun, V. and Clarke, V., 2006)

#### How it works in practice?

The process used for thematic analysis in this dissertation follows Braun and Clarke's (2006) six steps:

- 1. **Familiarisation:** Reading all selected articles, reports, and case studies carefully, sometimes more than once, to understand the overall picture.
- 2. **Initial coding:** Highlighting key sentences or paragraphs that seem important, and giving them short labels ("codes"). For example, a statement about AI reducing recruitment time might be coded as "time efficiency".
- 3. **Searching for themes:** Looking for connections between codes. For example, "time efficiency" and "cost savings" might both be linked under a broader theme of "operational benefits".
- 4. **Reviewing themes:** Checking if the themes make sense and cover all important points without too much overlap.
- 5. **Defining and naming themes** Giving each theme a clear name and definition so it's easy to refer back to later.
- 6. **Writing up:** Presenting the themes in the dissertation in a way that answers the research questions and connects back to the literature review.

#### Why does this method suit the topic?

AI in HRM is a topic that involves both technical developments and human experiences. Thematic analysis is flexible enough to capture both the trends in how companies are using AI (such as automation in recruitment) and also bring out the human and ethical concerns (such as bias or privacy issues) (Braun, V. and Clarke; V., 2006).

#### **Ensuring reliability and validity:**

The qualitative analysis required interpretation, but researchers implemented several measures to maintain fairness and reliability in their approach:

- The research used only reliable, high-quality sources, which are explained in section 3.2.
- The analysis procedure remained consistent for all sources to prevent selecting specific evidence.
- The researcher documented the selection criteria for themes so the process can be easily explained when necessary (Nowell, L.S., et al., 2017).

#### Limitations of this method

Thematic analysis depends heavily on the researcher's judgement, so that another person might group the same information slightly differently. However, because this dissertation uses a large variety of credible sources and applies the same method consistently, the findings should still be a fair reflection of the overall picture of AI in HRM.

#### 3.4 Ethical Considerations

Research ethics extends beyond rule compliance because it requires complete honesty and fairness and respect for others throughout the entire research process (Resnik, D.B., 2020). The use of secondary data (previously published information) in this dissertation requires attention to essential ethical obligations. The ethical responsibilities include maintaining academic integrity while ensuring accurate representation, balanced reporting, and responsible handling of sensitive topics.

#### Academic integrity and avoiding plagiarism

Academic integrity stands as the fundamental basis for producing credible research. The practice of academic integrity requires students to recognize other people's work while maintaining clear documentation of all source materials (Creswell, J.W. and Creswell; J.D., 2018). Academic plagiarism, which involves passing off someone else's work as your own, constitutes a severe academic violation that may lead to dissertation failure.

The Harvard referencing style is used throughout this dissertation to document every idea that comes from another source, whether it is quoted directly or paraphrased. The use of direct quotes remains minimal while paraphrasing techniques preserve the original meaning through new sentence structures. The work remains honest in its academic nature.

#### Using credible and transparent sources

The ethical responsibility requires both accuracy and trustworthiness of the included information. Peer-reviewed journals, along with official publications from reputable institutions, stand as more reliable sources than personal blogs and opinion pieces, according to Saunders, M., Lewis, P., and Thornhill, A. (2019).

The sources used for this dissertation were chosen according to the standards described in Section 3.2. The selection process guarantees credibility while reducing the chance of including outdated or biased information. The discussion section acknowledges potential bias in sources such as technology vendor promotions of their AI products, so readers can recognize possible limitations.

#### **Ethics in AI-related discussions**

The analysis of existing studies and case examples necessitates additional ethical considerations, given that Artificial Intelligence in HRM is the primary focus. The implementation of AI in HR systems presents three main ethical concerns:

- The use of AI systems produces unintentional discrimination against specific groups through algorithmic bias.
- The collection and analysis of employee data without proper consent creates privacy issues.
- The lack of transparency in AI decision-making processes makes it difficult for affected individuals to understand or challenge the outcomes (Jobin, A., et al., 2019).

The ethical presentation of such cases requires a balanced discussion about both advantages and disadvantages within their proper context. The dissertation will evaluate independent audit evidence regarding AI recruitment tool bias elimination claims instead of accepting the company's statement without verification.

### **Data protection and GDPR compliance:**

The research does not gather personal information, but it points to studies that do. The General Data Protection Regulation (GDPR) (European Commission, 2024) requires personal data to be processed in a manner that respects individual privacy. In practice, this means:

- Using only publicly available and anonymised data.
- Avoiding unnecessary inclusion of details that could indirectly identify individuals.
- Ensuring that any examples from case studies do not breach confidentiality agreements.

If a source contains potentially identifiable information, this dissertation summarises the findings without including the sensitive details, ensuring compliance with both legal and ethical standards.

#### **Balanced and fair reporting:**

Research ethics require scientists to avoid selective reporting by presenting only favorable evidence, which ignores conflicting data. The media, along with industry reports, tend to emphasize AI adoption success stories while minimizing ethical risks and implementation failures in the field of HRM.

The dissertation maintains equilibrium by showing both positive effects (such as increased efficiency and improved candidate experience) and adverse effects (such as bias, lack of transparency, and employee resistance). The research presents an accurate, trustworthy view of AI in HRM through its acknowledgment of both positive and negative aspects (Berg, B.L., and Lune, H., 2017).

#### Avoiding misinterpretation of technical material:

The ethical consideration involves a precise explanation of complex technical AI concepts, which should avoid oversimplification that leads to distortion. The unintentional misrepresentation of information leads readers to incorrect conclusions,

which damages the research's credibility. The description of technical AI processes (such as natural language processing in CV screening) requires verification against multiple reliable sources to maintain accuracy.

#### **Ethical responsibility in concluding:**

The ethical responsibility of not over-claiming stands as the last consideration. The conclusions of this study depend solely on research conducted by other authors because it involves secondary research. The ethical standard prohibits researchers from claiming new findings because this dissertation relies on existing data instead of collecting original primary information. The research draws synthesized insights from existing literature, which clearly defines both the scope and boundaries of its findings (Silverman, 2020).

The ethical requirements of this dissertation require researchers to give proper credit to ideas and select reliable sources while presenting both advantages and disadvantages fairly, safeguarding confidential information, and maintaining proper boundaries for secondary research. The work maintains academic integrity, legal compliance, and ethical standards for AI in HRM research.

#### 3.5 Limitations

No research method is perfect. The qualitative secondary research approach used in this dissertation is appropriate for studying the applications, benefits, and ethical implications of AI in HRM, but it has some limitations. It is important to recognize these in order to maintain transparency and to show the reader where the findings may have constraints.

### **Dependence on existing material**

The research relies solely on existing sources, as it does not collect primary data through interviews or surveys. The research findings are restricted to the information that other researchers, industry bodies, and organisations have published (Johnston, M.P., 2017). The research may not fully represent aspects of AI in HRM because other researchers and industry bodies have not studied or reported them sufficiently. The majority of AI in HRM case studies investigate large multinational corporations, resulting in limited research on AI adoption by smaller companies and start-ups. The study may produce findings that do not accurately represent all organizational settings because of this risk.

#### Potential bias in secondary sources

Every source reflects the perspective of its author. For instance:

- Academic studies may focus on specific theories or variables that interest the researcher, leaving out other factors.
- Industry reports may present AI tools in an overly optimistic light to promote adoption.
- Media articles may prioritise attention-grabbing stories rather than balanced coverage.

The dissertation actively works to present multiple viewpoints, but its content remains limited by the available research material (Saunders, M., Lewis, P., and Thornhill, A., 2019).

## Lack of direct, first-hand perspectives:

The research design prevents direct contact with HR professionals and employees and AI developers, so there is no available first-hand data about their personal experiences. The research relies on secondary data to understand individual attitudes toward AI, organizational culture, and internal resistance, as it lacks direct access to these elements.

The thematic analysis method enables researchers to identify patterns across multiple sources, yet it fails to capture the distinctive workplace environments (Silverman, D., 2020).

#### Rapidly changing technology:

The field of AI experiences rapid development. The information presented in a 2020 article about technology or policy may become obsolete by 2025. The fast-paced nature of AI research in HRM creates difficulties for studies because their findings lose their relevance with time (Brynjolfsson, E., and McAfee; A., 2017).

The dissertation uses the most recent sources available to minimize this problem. The dissertation includes older foundational studies and frameworks for background purposes even though specific details have evolved since their initial publication.

#### Scope and generalisability:

The research scope encompasses AI applications together with their benefits and ethical concerns. The broad scope enables a complete analysis yet prevents in-depth

examination of particular aspects. The subjects of AI bias in recruitment and AI ethics in employee monitoring could each support separate dissertations.

The research uses examples from different countries to establish general patterns instead of providing specific policy recommendations for individual nations. The research uses the Irish context as an example, but the examples do not directly apply to Ireland (Bell, E., et al., 2022).

#### **Interpretation subjectivity:**

The thematic analysis method requires systematic procedures, yet researchers must still interpret the data. Different researchers could organize the same findings into different thematic categories while focusing on different aspects of the data. Qualitative research accepts this normal process according to Braun and Clarke (2006), yet it means the analysis reflects the author's viewpoint.

The process described in Section 3.3 was applied uniformly to all sources while documentation tracked the reasoning behind coding and theme selection decisions.

## **Summary of limitations:**

The research limitations include its dependence on existing materials, potential source bias, lack of primary data, the fast pace of AI development, the broad scope of the topic, and the inherent subjectivity of qualitative analysis. The dissertation maintains its value despite these limitations, which should be considered when evaluating the research findings.

The research maintains transparency through open acknowledgment of these constraints, which establishes proper expectations about the limitations of the conclusions.

# Chapter 4 – Findings and Analysis

The chapter both presents and explains the evidence regarding Artificial Intelligence (AI) applications in Human Resource Management (HRM). The analysis follows five themes, which correspond to research questions and literature review findings about AI efficiency impact, decision-making influence, real-world implementation benefits, ethical challenges, and a separate case study section. The chapter uses peer-reviewed research together with professional body reports and well-documented company cases to compare findings between different sectors and geographic locations where possible (Marler and Boudreau, 2017; Stone et al., 2015).

#### 4.1 AI's Impact on Efficiency

## 4.1.1 What "efficiency" means in HR

The efficiency in HR refers to cycle time, error rates, throughput, cost-to-serve, and the proportion of HR capacity devoted to transactional vs. strategic work. AI affects this directly by automating high-volume, rules-based tasks and indirectly by improving process flow (fewer handoffs, clearer triage) and resource allocation (routing routine queries to chatbots; reserving experts for edge cases) (Stone et al., 2015; Marler and Boudreau, 2017).

#### 4.1.2 Recruitment and early-stage screening

AI-enabled Applicant Tracking Systems (ATS) and sourcing tools analyze extensive CVs, public profiles, and job descriptions to match skills with role requirements within minutes instead of hours or days (Upadhyay and Khandelwal, 2018). The practical effect is a shorter time-to-shortlist and quicker progression to interviews. Organizations that conduct large-scale hiring operations experience substantial speed improvements in their initial recruitment stages while reducing human mistakes (Deloitte, 2023). The reported cases demonstrate this trend because Unilever implemented AI-supported graduate recruitment, which reduced recruiter and candidate time consumption and shortened the overall recruitment cycle from months to weeks without compromising candidate satisfaction (Hern, 2019). Hilton's high-volume hiring demonstrates comparable results through automated pre-qualification and scheduling, which reduced cycle time from weeks to just days (Forbes, 2019).

## 4.1.3 HR service delivery and case management

The combination of chatbots and virtual assistants enables HR service desks to automatically resolve most Tier-0 and Tier-1 cases by answering FAQs and providing policy guidance and exception escalation (Stone et al., 2015; CIPD, 2023). The system delivers two-fold efficiency because employees receive continuous support without waiting in lines, and HR specialists dedicate their time to matters that need human judgment. The integration of these assistants within HR portals and collaboration tools decreases context switching and rework, which results in shorter cycle times and better first-contact resolution (Deloitte, 2024).

### 4.1.4 Learning and development (L&D)

AI personalises learning pathways and curates content to skill gaps. Platforms use role profiles, project history, peer trajectories, and performance signals to infer needs before recommending modules or micro-learning at the point of need (Qin and Kochan, 2020). This reduces search time and increases training relevance, which improves utilisation and completion rates. In practical terms, L&D teams spend less time on manual needs analysis and more on capability strategy and enablement (Workday/IBM, 2018).

#### 4.1.5 Where efficiency gains stall

Efficiency is not automatic. Three transitional frictions show up consistently:

- Data quality and integration: messy job architectures, duplicate records, and siloed HRIS/ATS slow down deployment and dilute AI benefits (Stone et al., 2015).
- Process redesign: bolting AI onto old processes tends to hard-code inefficiency; redesigning steps, service levels, and escalation is essential (Davenport et al., 2020).
- Adoption and change: early resistance (fear of surveillance or job loss) and learning curves can depress short-term productivity; targeted communications and upskilling help (CIPD, 2023).

**Finding 1:** All enhances HR efficiency across different settings when organizations can use their data effectively, redesign their workflows, and provide support to their users. The most noticeable benefits emerge from recruitment processes, HR shared services, and learning and development content curation, according to Marler and

Boudreau (2017), Upadhyay and Khandelwal (2018), Deloitte (2023), and Hern (2019).

#### 4.2 Influence on Decision-Making

### 4.2.1 From intuition to evidence-informed judgement

The second central theme demonstrates how AI transforms HR decision-making from instinctual to data-driven processes that include predictive and prescriptive capabilities (Davenport et al., 2020). Well-designed systems enhance human judgment through the combination of automatic signal detection and structured decision-making processes.

### 4.2.2 Predicting attrition and enabling targeted retention

The predictive models analyze signals including tenure and pay progression, internal mobility and engagement, manager changes, and workload proxies to forecast resignation risk at both team and individual levels (Fountaine, McCarthy, and Saleh, 2019). The actual value lies in how the score enables organizations to implement early targeted interventions through career moves, manager coaching, and flexible arrangements. Organizations state that this approach eliminates standard retention programs by providing individualized actions, which lead to better results and reduced costs (Davenport et al., 2020).

#### 4.2.3 Workforce planning and skills forecasting

AI enables organizations to model supply and demand for roles and capabilities by converting retirement data, market shifts, product launches, and policy changes into headcount and skill implications, which enables recruiters and L&D to take action months in advance (Deloitte, 2024). The forward view of skills cycles, which is particularly short for data and AI roles themselves, helps organizations avoid costly last-minute hiring and maximize internal talent utilization (LinkedIn, 2023).

#### 4.2.4 Improving quality of hire

The system learns from profiles of successful employees to detect which skills are adjacent to each other (the "nearby skills" someone can learn quickly). Organisations can expand their talent pools and enhance the quality of their shortlists by focusing on learnability and transferable skills (Upadhyay and Khandelwal, 2018). The recruiters

then use interviews to assess the judgment, motivation, and team fit dimensions, which algorithms cannot infer reliably.

### 4.2.5 Culture and engagement insights

The application of Natural Language Processing (NLP) on surveys and open-text feedback reveals themes (workload, recognition, trust) that identify hotspots before annual surveys. Leaders can respond with targeted interventions instead of blanket programmes (Davenport et al., 2020).

## 4.2.6 Limits and judgment

The current risks include model dependency (automation bias) and biased data (O'Neil, 2016; Brougham and Haar, 2018). Models that predict future success based on past promotion decisions may continue to perpetuate inequity if those past decisions were inequitable. The defensible stance is AI as decision support, with human oversight to check context, challenge anomalies, and ensure fairness and legal compliance (Raghavan et al., 2020).

**Finding 2:** AI enhances decision quality through its ability to deliver early warnings (attrition) and detailed future outlooks (skills and workforce plans) while humans maintain control of judgments and data pipeline governance (Davenport et al., 2020; Raghavan et al., 2020).

## 4.3 Benefits Observed in Implementations

#### 4.3.1 Candidate experience and employer brand

AI assistants provide immediate responses to questions while maintaining applicant information and conducting interviews without any obstacles. The instant reaction of AI assistants matters to consumer brands because their applicants frequently represent their customer base. The implementation of chatbots by L'Oréal and other organizations leads to decreased candidate drop-off rates and enhanced candidate satisfaction, according to TechTarget (2018) and Forbes (2019). The speed of decision-making decreases candidate uncertainty while demonstrating an organization's commitment to valuing candidate time.

### 4.3.2 Personalised development and internal mobility

The platform benefits employees by showing their skills mapping, adjacent roles, and learning steps to achieve those roles. IBM's ecosystem of skills platforms, for instance, supports curated learning and internal movement, raising completion rates and strengthening pipelines for critical roles (Qin and Kochan, 2020; Workday/IBM, 2018). For organisations, this lowers external hiring dependence, improves retention, and builds strategic capabilities faster.

#### 4.3.3 Scalable HR service delivery

Multinational companies standardize HR services without directly increasing headcount through the combination of chatbots, knowledge bases, and workflow routing. The consistent answers reach employees across different time zones while specialists handle unique situations (Stone et al., 2015; Deloitte, 2024). The implementation of pre-installed AI features in HRIS suites benefits SMEs. Still, the actual benefits depend on how well they maintain their data and how well their employees adopt the system.

## 4.3.4 Compliance and risk management

The implementation of AI systems that record policies, track approvals, and maintain rationale records enhances auditability. The combination of tools that track labour law modifications and detect inconsistencies proves particularly useful for organizations operating across multiple jurisdictions (European Commission, 2024). The EU AI Act requires increased oversight of employment-related systems, making documented processes and evidence of oversight essential for continued use.

## 4.3.5 Strategic elevation of HR

The reduction of transactional work allows HR professionals to focus on strategic activities, including inclusion goals, culture shaping, workforce planning, and leadership development. The analytics conversation enables HR to connect more closely with finance and corporate strategy, which enhances their organizational influence (Marler and Boudreau, 2017; Davenport et al., 2020).

#### 4.3.6 Boundary conditions and counter-evidence

Benefits are context-dependent. Fragmented data, unclear processes, or minimal change support can delay the ROI. Some teams report "dashboard fatigue" when

insights multiply without prioritisation. The best results are achieved when leaders set paired targets (operational and human), for example, reduce time-to-hire and increase candidate satisfaction, and assign product ownership for AI systems to sustain improvements (Davenport et al., 2020).

**Finding 3:** The advantages of AI in HRM reach further than efficiency to experience, compliance, scalability, and strategic influence, but they scale only with sound data, thoughtful process design, and accountable ownership (Marler and Boudreau, 2017; Deloitte, 2024).

### 4.4 Ethical Challenges

The ethical challenges of AI deployment in HRM in Ireland emerge from the combination of legal requirements, employee rights, and technological trust issues. The Employment Equality Acts 1998–2021 and the Data Protection Act 2018, along with the General Data Protection Regulation (GDPR) requirements, must guide the implementation of global principles in Ireland. The EU AI Act 2024 presents new requirements for employers because it will directly apply in Ireland as EU law (European Commission, 2024; Data Protection Commission, 2023).

#### 4.4.1 Bias and discrimination

The Irish Employment Equality Acts 1998–2021 establish nine protected grounds for employment discrimination, which include gender, civil status, family status, sexual orientation, religion, age, disability, race (including colour, nationality, and ethnic or national origins), and membership of the Traveller community. The protections under these laws apply to every phase of employment, starting from recruitment through to promotion and training, and ending at dismissal (Irish Statute Book, 2021)

AI models trained on biased data can inadvertently breach these provisions. The optimization of algorithms using historical recruitment data, which shows underrepresentation of protected groups, leads to continued exclusion of these groups. The Workplace Relations Commission (WRC) has the authority to handle discrimination cases related to hiring and employment practices, and employers maintain full responsibility as decision-makers despite vendor or software provider involvement.

The Irish context requires organizations to perform bias testing before deployment and continuously afterward, while documenting fairness audits and ensuring selection criteria align with job-related requirements that have objective justifications. Employers need to keep detailed records because these documents will serve as essential evidence during Workplace Relations Commission (WRC) proceedings (Raghavan et al., 2020; WRC, 2023).

## 4.4.2 Transparency and explainability

The GDPR, through Article 15 and the Data Protection Act 2018, grants Irish citizens the right to obtain meaningful details about automated decision-making logic, along with its processing significance and expected outcomes (Data Protection Commission, 2023).

The DPC requires organizations to inform employees and candidates about the following aspects when AI supports HR decisions:

- what data are being used,
- how the decision is reached,
- whether a human is involved, and
- how to contest or appeal the decision.

Irish employers need to explain AI decisions in simple terms to candidates and employees while maintaining technical documentation for regulatory and auditing purposes (Wachter, Mittelstadt, and Floridi, 2017). Irish organizations need to establish data processing agreements that fulfill GDPR requirements, especially for third-country transfers, since many AI vendors operate outside the EU (Data Protection Commission, 2023).

#### 4.4.3 Privacy and data protection

The Data Protection Act 2018, which implements GDPR, applies to all personal data processing in Ireland, including the use of AI in HR functions (Irish Statute Book, 2018). AI-based systems handle sensitive personal data (e.g., health information in wellness programmes, ethnic origin in diversity analytics), which under Article 9 GDPR needs explicit consent or another lawful basis such as carrying out obligations in employment law (European Commission, 2016).

The GDPR principles of data minimisation, purpose limitation, and storage limitation are especially relevant (European Commission, 2016). AI tools need to acquire only the required data for their defined HR purpose and must establish valid reasons for data storage duration. High-risk AI applications, including automated profiling for recruitment or performance management, need a Data Protection Impact Assessment

(DPIA) under Article 35 GDPR (Data Protection Commission, 2023). The DPC requires DPIAs to evaluate both technical security measures and fairness, proportionality, and rights-related impacts on individuals.

## 4.4.4 Consent, fairness duties, and vendor accountability

Employers in Ireland who implement third-party AI tools maintain their position as data controllers under GDPR. The employer retains complete responsibility for GDPR compliance even though the system operates through a vendor, according to the Data Protection Commission (2023). Employers need to select processors under Article 28 GDPR who demonstrate sufficient compliance guarantees through written data processing agreements.

- Employers must include the following requirements in their contracts:
- Employers must obtain model validation evidence that applies to Irish and EU legal frameworks.
- Employers need to obtain bias and fairness testing results.
- The agreement must include provisions for continuous monitoring and incident reporting requirements.
- The employer needs access to inspect or audit the AI system as part of the agreement.

The DPC recommends that organizations disclose their AI practices to employees and candidates while establishing clear procedures for appeals. The failure to establish transparency about AI practices will violate GDPR while simultaneously damaging trust, which makes adoption more challenging, according to the CIPD (2023).

#### 4.4.5 Trust, acceptance, and workplace relations

The Irish employment relations environment heavily depends on trust for workers to accept new technological implementations. Employee representative bodies, including trade unions, expect HR AI implementation to follow collective agreement consultation procedures according to ICTU (2021). The acceptance of AI systems becomes more likely when organizations present AI as an enhancement to human decision-making processes through pilot testing and training programs and defined governance frameworks (Brougham and Haar, 2018).

The successful implementation of new technologies in Irish multinational companies depends on employee involvement from the start and the establishment of governance boards that include HR representatives and legal, IT, and data protection officers. The

WRC and Labour Court serve as dispute resolution bodies, so documented compliance and communication history act as essential safeguards.

## Finding 4:

The ethical risks of AI in HRM in Ireland are manageable but require a compliance-by-design approach. Employers need to implement global best practice (fairness audits, explainability, privacy-by-design) alongside Irish-specific legal obligations under the Employment Equality Acts, the Data Protection Act 2018, and GDPR, as interpreted by the DPC and enforced by the WRC. Organisations can achieve both legal compliance and sustainable AI adoption in HRM by implementing governance, transparency, and consultation from the beginning.

#### 4.5 Case Study

The research findings are supported by this section, which presents two detailed case studies and one counter-example. The analysis of each case uses efficiency as well as decision quality, benefits, and ethical considerations as evaluation criteria.

## 4.5.1 AIB – AI-Driven Recruitment Screening

Allied Irish Banks (AIB) implemented an AI-based recruitment screening tool during 2022 to handle the large number of graduate and early-career applications. The goal of this initiative was to optimize candidate selection while upholding both Irish equality and data protection regulations.

The AI system employed Natural Language Processing (NLP) to evaluate CVs and application forms against job requirements, which resulted in suitability-ranked shortlists. AIB implemented multiple safeguards to meet the requirements of the Employment Equality Acts 1998–2021 and the Data Protection Act 2018.

- The system included bias testing to identify and reduce algorithmic discrimination that affects protected characteristics, including gender, age, and ethnicity.
- The recruitment staff maintained full authority to decide on shortlisting decisions through human oversight.
- The company implemented transparency measures to disclose AI decision-making roles to candidates according to GDPR Article 15 requirements (Data Protection Commission, 2023).

The screening process became 38% faster through the pilot, which enabled recruiters to concentrate on candidate relations and enhance interview performance. The surveys from candidates showed that their trust in the recruitment process grew when they received clear information about AI involvement. AIB recognized the requirement for continuous audits to verify ongoing fairness and compliance when their algorithms undergo updates (AIB, 2023).

The case demonstrates that Irish businesses can use AI in recruitment effectively without violating legal requirements or damaging trust when proper governance systems remain in place.

### 4.5.2 Workhuman – AI-Powered Employee Engagement Analytics

The Dublin-based HR technology company Workhuman employs AI technology to improve its worldwide recognition and engagement platform. The AI system processes millions of peer recognition messages and employee feedback entries to detect patterns in workplace morale, collaboration, and inclusion (Workhuman, 2023). The Irish compliance framework of Workhuman's system follows privacy-by-design principles. The Data Protection Act 2018 and GDPR enable clients to establish data retention periods and reporting levels for pseudonymised datasets, which prevents accidental identification of individuals (Data Protection Commission, 2023).

The AI system enables HR teams to detect early signs of employee disengagement and burnout, allowing them to take prompt action. A decrease in positive recognition across an entire department would trigger leadership training and wellness programs before employee turnover becomes severe.

The Workhuman case demonstrates to Irish employers how AI in HRM systems can maintain employee trust through advanced analytics, provided transparency, consent, and governance frameworks are prioritized.

#### 4.5.3 Unilever – AI Recruitment at Scale (International Context)

Unilever demonstrates an established large-scale implementation of AI in recruitment processes. The recruitment process at Unilever uses AI to deliver gamified psychometric tests, AI-scored asynchronous video interviews, and predictive analytics for candidate selection.

The company achieved two significant benefits through its AI recruitment system: hiring time decreased from four months to four weeks, and candidate diversity in final shortlists improved (Hern, 2019). Unilever maintains human review stages for all

shortlisted candidates because AI video analysis has raised concerns about potential biases in facial expression and speech analysis.

Unilever operates worldwide, yet its AI recruitment model provides essential insights to Irish employers who want to achieve fast and large-scale hiring with diverse results through ethical protection.

#### 4.5.4 Counter-example: Algorithmic hiring failure

**Context and lesson:** The experimental hiring model at Amazon learned to identify signals that were associated with women because the training data contained historical biases (O'Neil, 2016). The system was abandoned.

**Efficiency vs. error:** The tool may have appeared efficient at ranking candidates, but it encoded biased definitions of "merit". This illustrates a core lesson: speed without fairness damages outcomes and legitimacy.

Governance takeaway: Bias testing, human oversight, and explainability are not peripheral; they are central to sustainable value. Employers, not just vendors, are accountable for impacts (EEOC, 2023).

**Finding 5:** The evidence from cases shows that AI can reduce cycle times and improve decision-making, but sustained success requires thorough validation, transparency, and human agency maintenance.

#### **Chapter Synthesis**

Three integrative findings emerge from the research results.

- 1. Compounding value through data and design. The efficiency improvements from automation result in better quality data that enhances planning analytics, retention analytics, and skills analytics. Organizations that treat AI systems as products with owners, roadmaps, and lifecycle monitoring experience compounding benefits (Davenport et al., 2020).
- 2. **Human-in-the-loop as a principle, not a slogan.** The most credible and effective implementations use AI to augment professional judgement, not replace it. The ethical standards and legal requirements for human oversight in AI systems are met by this approach (Wachter, Mittelstadt, and Floridi, 2017; European Commission, 2024).
- 3. **Governance converts pilots into practice.** Fairness testing, documentation (model cards, validation studies), privacy-by-design, and vendor accountability are what turn

promising pilots into sustainable operations. Without governance, even impressive early results can unravel (Raghavan et al., 2020; EEOC, 2023).

The chapter demonstrates that AI in HRM generates actual and consistent value across efficiency and decision quality, experience, and strategic influence when adoption follows responsible design principles and maintains human involvement.

# **Chapter 5 – Discussion**

The chapter evaluates the evidence from Chapter 4 through the lens of Artificial Intelligence (AI) in Human Resource Management (HRM) academic and professional literature. The chapter explains organizational, employee, and societal effects while presenting an operational framework for ethical AI governance in HRM and establishing research and practice directions for the future. The discussion follows five main themes, which include interpretation of findings and comparison with existing literature, practical implications, ethical management in AI-driven HRM, and future outlook.

#### 5.1 Interpretation of Findings

## 5.1.1 What the findings mean in plain terms

The available evidence demonstrates that AI technology currently transforms HRM operations through concrete changes. AI technology performs repetitive tasks based on rules (screening, scheduling, FAQs) at a fast pace while providing data-driven signals to enhance decision-making and delivering personalized support to candidates and employees through quick responses (Marler and Boudreau, 2017; Stone et al., 2015). The documented cases of Unilever's hiring and Hilton's volume recruitment and IBM's skills and retention analytics and Irish examples like AIB (recruitment) and Workhuman (engagement analytics) demonstrate these benefits (Hern, 2019; Forbes, 2019; Qin and Kochan, 2020; AIB, 2023; Workhuman, 2023).

The research shows that value depends on specific circumstances. The three conditions of data readiness (clean, connected, representative) and process redesign (not just bolting AI on top of legacy workflows) and human-centred adoption (where AI augments rather than replaces professional judgement) must be met to achieve efficiency and decision-quality gains (Davenport et al., 2020). The benefits of AI implementation become stalled when any of these conditions remain weak, while dashboards multiply without meaningful action, and short-term disruptions surpass the initial advantages (Deloitte, 2024; CIPD, 2023).

## 5.1.2 The role of judgement and the "augmented HR" model

The best results emerged when AI functioned as a decision support tool instead of making decisions throughout recruitment, development, and workforce planning processes. The "augmented HR" model combines technical advantages of scale and pattern recognition with human capabilities for context understanding, ethical decision-making, and negotiation. The research indicates that proper training of practitioners to evaluate and understand model outputs enables AI to enhance human decision-making rather than replace it (Davenport et al., 2020).

#### 5.1.3 Ethical risks are real but manageable

The research confirms that bias, opacity, and privacy risks exist as real problems that threaten fairness and trust when organizations fail to address them (O'Neil, 2016; Raghavan et al., 2020). These risks became manageable when organizations implemented compliance-by-design approaches through pre-deployment validation and periodic bias audit and explainability artefacts (e.g., model cards) and privacy-by-design and genuine human oversight (Wachter, Mittelstadt, and Floridi, 2017; European Commission, 2024; EEOC, 2023). The Irish context increases this: The Employment Equality Acts and the Data Protection Act 2018/GDPR establish enforceable obligations which match best practice (Irish Statute Book, 2018; Irish Statute Book, 2021; Data Protection Commission, 2023).

#### 5.1.4 Where the findings stretch or challenge assumptions

Two tensions stand out. The most accurate models, such as complex ensembles and deep learning models, tend to be the least explainable to non-technical audiences. The research indicates that HR teams select less complex and more understandable methods in critical situations to preserve both contestability and trust (Jobin, Ienca, and Vayena, 2019; Wachter et al., 2017). The speed gains need to be evaluated for any possible distributional consequences. The organisations that measured both time-to-hire and adverse impact were able to maintain their gains without reversing their progress (Raghavan et al., 2020).

The value of AI in HRM is not inherent because it depends on the selection of data, process, and governance mechanisms. The benefits become real and repeatable when organisations make choices that focus on augmentation, transparency, and fairness.

#### 5.2 Comparison with Existing Literature

#### 5.2.1 Convergence with mainstream HR-analytics research

The research results confirm previous HR analytics studies, which demonstrate that reliable data combined with systematic analysis produces better HR decisions and business results (Marler and Boudreau, 2017). The study confirms previous research by demonstrating that data quality, together with clear problem definition and actionable metrics, matter more than vanity dashboards. The interpretation extends previous research by explaining how chatbots, scheduling AI, and skills mapping systems modify the everyday work of HR professionals and their experience, rather than just measuring analytic maturity at a high level.

### 5.2.2 Reinforcing technology-and-work scholarship

The field of technology and work research has demonstrated that digital tools transform work activities and job responsibilities instead of eliminating entire job positions (Brynjolfsson and McAfee, 2017). The evidence supports this view in HR because automation moves time from transactional work to advisory, coaching, and design, which elevates HR's strategic contribution when the function adopts these augmented roles (Stone et al., 2015; Davenport et al., 2020). Organisations that did not redesign their roles and incentives saw their tools either perform poorly or generate "shadow work" (e.g., chasing data quality), which reduced perceived value (Deloitte, 2024).

#### 5.2.3 Ethics and governance: agreement and nuance

The literature on algorithmic fairness warns against simplistic fixes and emphasises lifecycle governance (Raghavan et al., 2020). The findings concur, showing that performance without governance is fragile. Importantly, the Irish-EU regulatory overlay (GDPR, AI Act) operationalises that literature into concrete organisational duties: DPIAs for high-risk processing, documentation, validation, human oversight, and in some cases prohibitions (European Commission, 2024; Data Protection Commission, 2023). This helps bridge theory and practice by turning "shoulds" into "musts".

#### 5.2.4 Points of divergence or extension

The research includes two new findings that build upon previous studies. The paired targets insight, which states that the most enduring implementations require both operational goals (e.g., time-to-hire) and human outcomes (e.g., candidate NPS, internal mobility), is not explicitly mentioned in the literature but appeared frequently

in practice cases (Davenport et al., 2020; Deloitte, 2024). The Irish context demonstrates how specific national frameworks directly influence HR AI governance practices, which go beyond basic global recommendations (Irish Statute Book, 2018; Irish Statute Book, 2021; WRC, 2023).

### **5.3 Practical Implications**

The following section presents a practical guide for various stakeholders to apply the research results. The playbook addresses organisations that want to implement or expand AI in HRM while maintaining speed, fairness, and trust.

#### 5.3.1 For CHROs and HR leadership teams

Start with business-relevant use cases. Select 2–3 specific problems (e.g., reduce time-to-hire by 30%; increase internal mobility by 20%; cut Tier-1 HR tickets by half) and determine how AI will transform workflow, roles, metrics, and service levels (Davenport et al., 2020). Small, visible wins build momentum.

Treat AI systems as products, not projects. A product owner (in HR) should lead a cross-functional squad (data, legal/privacy, IT security) with a roadmap. The product approach enables continuous lifecycle monitoring and feedback loops and incremental improvements instead of single one-off deployments (Deloitte, 2024).

**Set paired targets:** Match an operational KPI (e.g., cycle time) with a human KPI (e.g., candidate NPS, diversity of shortlist, employee sentiment). The approach maintains both speed and equity and experience to prevent success that damages trust or inclusion (Raghavan et al., 2020).

**Invest in people capability:** Develop data literacy and AI judgment skills for HR professionals to analyze model outputs, detect spurious correlations, and define their operational boundaries. The training of recruiters and HRBPs should focus on augmented workflow operations instead of tool usage (CIPD, 2023).

#### 5.3.2 For people analytics and data teams

The organization should first establish solid data foundations by unifying job structures, fixing identity connections, and tracking data origins. The reliability of

data creates additional value in downstream processes while minimizing the need for firefighting activities (Marler and Boudreau, 2017).

Select models that match specific needs for high-stakes decisions, such as hiring and promotion, even if they provide limited explainability to non-technical stakeholders (Wachter, Mittelstadt, and Floridi, 2017).

Embed fairness testing: Define fairness metrics relevant to the decision (e.g., selection rate parity, error parity). Test pre-deployment and in production; monitor drift; document results and actions (Raghavan et al., 2020).

The organization should implement explainability through model cards and data sheets, which use a tiered explanation system (technical, HR practitioner, employee). The HR department should maintain a changelog to provide credible updates to employees (Jobin, Ienca, and Vayena, 2019).

#### 5.3.3 For legal, privacy, and compliance

**Run DPIAs where warranted:** Recruitment profiling, retention prediction, and performance analytics can be high-risk under GDPR; conduct DPIAs that assess necessity, proportionality, and rights impacts — not only security (Data Protection Commission, 2023).

Contract for accountability: Under Article 28 GDPR, ensure processor agreements include validation evidence, fairness testing, monitoring, incident reporting, audit rights, and data transfer safeguards (Irish Statute Book, 2018).

**Map regulatory horizon:** Track the EU AI Act's high-risk obligations (risk management, data governance, documentation, human oversight) and sectoral guidance (EEOC in the US; DPC guidance in Ireland). Prepare governance templates now (European Commission, 2024; EEOC, 2023).

#### 5.3.4 For employee representatives and works councils

The process should begin with obtaining clear definitions of purpose, data types, oversight mechanisms, and appeal procedures. The use of AI for work organization and monitoring purposes may trigger consultation requirements based on custom or agreement practices (ICTU, 2021).

Request impact reporting. The organization should provide periodic reports about fairness tests, complaints, and remedial actions. Transparency builds trust between parties while minimizing the need for adversarial escalation (CIPD, 2023).

### 5.3.5 For SMEs and resource-constrained organisations

**Buy outcomes, not "AI":** The preferred approach involves using vendor capabilities that are integrated into HR suites with established templates for ATS screening and FAQ chat functions instead of custom models that require maintenance (Deloitte, 2024).

**Keep it simple:** Select two essential use cases and establish precise success criteria and basic governance structures that include privacy statements, appeal channels, and scheduled fairness assessments. Tools that candidates or employees cannot understand should be avoided (Wachter et al., 2017).

#### 5.3.6 For vendors and implementation partners

**Design for compliance-by-default:** Validation summaries, fairness metrics, model cards, DPIA support, and change logs should be standard artefacts rather than premium extras (Jobin, Ienca, and Vayena, 2019).

**Support paired KPIs:** Align product analytics to both operational and human KPIs so clients can evidence value responsibly (Davenport et al., 2020).

**Enable localisation:** Offer configurations aligned to Irish and EU requirements (data minimisation, documentation, consent notices, human-in-the-loop checkpoints) (Data Protection Commission, 2023; European Commission, 2024).

**Practice implication (summary):** Treat AI in HRM as a socio-technical change. The levers that sustain value are as much organisational (roles, incentives, communication) as they are technical (models, data, APIs).

## **5.4 Ethical Management in AI-Driven HRM**

The available evidence supports a governance framework that can be put into practice without disrupting delivery. The following framework combines academic recommendations with regulatory requirements (Wachter et al., 2017; Raghavan et al., 2020; European Commission, 2024).

#### 5.4.1 The "4P + H" governance model

- **Purpose**: Be specific: What decision is supported? For whom? What is out of scope (e.g., no emotion inference; no fully automated rejection)? Purpose clarity avoids function creep and supports DPIA necessity/proportionality assessments (Data Protection Commission, 2023).
- **Pipelines (data & models)**: Document inputs, transformations, features, and targets. The European Commission (2016) and Wachter et al. (2017) recommend using the least data required (data minimisation), avoiding proxies for protected attributes, and preferring interpretable features when stakes are high.
- **Protections**: The system should include fairness testing and red-team reviews for misuse detection as well as privacy controls (access, retention, encryption) and monitoring for drift/adverse impact. The system should maintain model cards, data sheets, and an audit trail (Raghavan et al., 2020; Jobin, Ienca, and Vayena, 2019).
- People: Assign accountable owners (model, data, decision). Train HR users in AI literacy and ethics. Provide clear appeal routes for candidates and employees; ensure unions/employee reps are briefed where relevant (CIPD, 2023; ICTU, 2021).
- Human oversight (H): The "human-in-the-loop" role requires more than token approval because humans need to determine when they should take control, seek additional information, or escalate the process. The oversight process should be both practical for human operators and their experts and supported by evidence (Wachter et al., 2017; European Commission, 2024).

### **5.4.2** Operating principles for HR contexts

- Explainability over maximal accuracy in high-stakes decisions: choose models that stakeholders can understand and contest (Wachter et al., 2017).
- **Proportionality and necessity**: choose the least intrusive method to achieve the HR goal (European Commission, 2016).
- **No secret automation**: disclose AI use in recruitment and employee analytics; signpost appeal routes (Data Protection Commission, 2023).
- Continuous learning: audit and iterate; adjust features and thresholds when adverse impact or erroneous patterns emerge (Raghavan et al., 2020).

• **Vendor accountability**: include fairness and monitoring obligations contractually; verify, don't assume (EEOC, 2023; European Commission, 2024).

### 5.4.3 Irish legal touchpoints

Employers in Ireland must base their governance structure on the Employment Equality Acts 1998–2021 for non-discrimination practices in hiring and promotion, training, and dismissal, and the Data Protection Act 2018/GDPR for lawfulness and transparency, and DPIAs and rights of access and explanation (Irish Statute Book, 2018; Irish Statute Book, 2021). The EU AI Act establishes mandatory high-risk requirements for employment-related AI systems, which require organizations to document their processes and maintain human oversight and conduct post-market monitoring (European Commission, 2024). The WRC handles equality claims, while documented diligence will become essential when AI systems are involved (WRC, 2023).

**Ethical management (summary):** The implementation of responsible AI in HRM functions as a capability that represents a repeatable work method instead of a checklist. The 4P + H model serves as a practical framework that fulfills both academic requirements and Irish-EU legal standards.

#### 5.5 Future Outlook for AI in HRM

The upcoming three to five years will bring both ongoing developments (further automation, better analytics) and disruptive changes (generative AI as a workplace copilot; new regulations; evolving labour expectations). The following are the most credible trajectories based on current evidence.

## 5.5.1 GenAI as an HR and manager "co-pilot"

The use of Generative AI (GenAI) will expand to create job descriptions, interview guides, performance feedback, and learning content that humans will review. The value is productivity (fewer blank-page starts) and consistency (templates aligned to policy), but organisations will need strong guardrails (approved knowledge bases; retrieval-augmented generation) to avoid hallucinations and policy drift (Deloitte, 2024; LinkedIn, 2023). HR teams will move from "writers" to editors and curators.

### 5.5.2 Skills graphs and internal talent marketplaces

Enterprise skills graphs will gain broader acceptance because they connect employee capabilities to project assignments and job roles. The system will simplify employee movement between roles and improve learning and development programs by using data from IBM and similar systems (Qin and Kochan, 2020). The challenge: harmonising job architecture and skill taxonomies across business units and geographies.

#### 5.5.3 Continuous listening with ethical analytics

Sentiment and collaboration analytics that operate continuously will help organizations detect burnout and cultural risks earlier when organizations establish specific boundaries about keystroke logging and covert surveillance. Organizations that work with employees to develop their listening programs will achieve benefits through trust-based relationships (CIPD, 2023; Workhuman, 2023).

#### 5.5.4 Regulation moves from guidance to enforcement

The EU AI Act will introduce obligations and enforcement mechanisms that will increase documentation requirements, validation processes, and oversight responsibilities (European Commission, 2024). We should expect more case law on algorithmic discrimination and transparency in hiring and performance decisions — in Ireland, likely via the WRC or the courts. Vendors will differentiate on compliance readiness and explainability.

#### 5.5.5 New measures of value

The ROI story will evolve beyond cycle time and cost. The focus will shift toward quality-of-hire proxies and internal mobility rates, diversity progression, time-to-productivity, and well-being indices as part of the "paired KPIs" approach that links value to both operational and human outcomes (Davenport et al., 2020; Deloitte, 2024).

#### 5.5.6 Workforce capability and culture

AI literacy will become a core HR competence. HR professionals will be expected to translate model outputs, interrogate fairness metrics, and explain decisions. Culture will be decisive: organisations that frame AI as assistive and uphold human agency

will sustain adoption; those that position it as unilateral automation will face resistance (Brougham and Haar, 2018; CIPD, 2023).

Future outlook (summary): The direction of travel is clear: more augmentation, more documentation, and more emphasis on trust. The winners will be those who combine technical capability with principled governance and a human-centred culture.

#### **Conclusion**

The chapter demonstrates that AI's influence on HRM becomes most evident through the combination of data quality, process redesign, and ethical governance, which transforms promising tools into durable practice. The research findings linked to existing literature through an expanded HR model and paired KPIs and compliance-by-design. A 4P + H governance model provides an operational framework that fulfills academic standards and Irish-EU legal requirements. The field will evolve through GenAI co-pilots, skills graphs, continuous listening, and an advancing regulatory framework. Organizations that dedicate resources to people capability development and principled governance practices will achieve the best results from AI benefits while protecting fairness, privacy, and trust.

# **Chapter 6 – Conclusion and Recommendations**

### 6.1 Summary of Key Insights

The research investigates Artificial Intelligence (AI) applications in Human Resource Management (HRM) while studying organizational advantages and ethical concerns. The research shows AI has transitioned from being an outside technology to becoming a fundamental operational element in organizations throughout the world and beyond. Organizations utilize AI tools across various HR functions, including recruitment and onboarding, performance management, learning and development, employee engagement, and workforce analytics, to transform both strategic and administrative HR functions.

The research shows that AI achieves its best results when it functions as an enhancement tool instead of a replacement tool. The "augmented HR" model proposed by Davenport et al. (2020) demonstrates that AI achieves its highest value by performing data-intensive and repetitive work and pattern recognition tasks while human professionals handle empathy and ethical judgment and cultural understanding. The principle became evident through the analysis of case studies. The implementation of AI candidate screening at Allied Irish Banks (AIB) enabled the company to process large application volumes more efficiently. Human recruiters maintained responsibility for making final selection choices because they evaluated candidates based on cultural fit and diversity goals to meet the Employment Equality Acts 1998–2021 requirements (Irish Statute Book, 2021).

Workhuman's sentiment analysis platform verified the pattern by revealing the findings. The system examines large amounts of employee feedback data to identify engagement patterns, but managers view these findings through the lens of team relationships and corporate culture. Human interpretation of algorithmic analysis results in a system that supports human capabilities rather than substituting them.

The data found in Chapter 2 supports this interpretation. Marler and Boudreau (2017) determined that AI systems enhance HR operational efficiency best when they remain part of human-monitored workflows. The lack of protection mechanisms enables AI systems to convert sophisticated human-oriented decision-making into exclusive data-driven responses, which create ethical problems.

The main takeaway involves maintaining proper data quality standards and implementing appropriate governance measures. The literature (Raghavan et al., 2020) and AIB case study demonstrate that incorrect or prejudiced data sets result in discriminatory outcomes, which damage both organizational compliance and fairness. The strict data processing regulations under the Data Protection Act 2018 and GDPR in the Irish environment require organizations to maintain high vigilance. Bias audits and data cleansing, along with algorithmic decision-making process documentation, serve as essential compliance requirements rather than optional best practices.

Organizations can achieve significant operational benefits by adopting AI technologies in their Human Resource Management systems. Unilever demonstrates AI benefits for global recruitment through their hiring timelines, which decreased by 90% in various markets according to Hern (2019). The company faced negative feedback about its video interview assessment system because speed did not justify compromising transparency or equal treatment for candidates.

The successful implementation of AI depends on creating cultural compatibility and establishing trust, according to the Irish case studies. Workhuman's model enables employee acceptance by using privacy-by-design features that combine pseudonymization with client-controlled access to sensitive information. Hilton deployed their AI recruitment enhancements step by step to let employees learn the tools while preserving candidate experiences (Forbes, 2019).

The research verifies that AI has real transformative capabilities for HRM, yet its success depends on purposeful implementation, which stays ethical and focuses on human elements. The implementation of AI in Ireland must focus on augmenting human HR decision-making processes because employee rights and cultural alignment, along with regulatory compliance, remain highly valued in the country.

#### 6.2 Recommendations for Ethical AI Adoption

The study shows that organizations that want to implement AI in HRM in Ireland must implement systems that merge technology usage with human direction and ethical protocols. Several recommendations emerge from this study.

Organizations need to understand AI as a strategic tool rather than an automated system. All HR decisions regarding recruitment, promotion, and performance management should stay within the domain of human professionals. AI systems should handle candidate screening and performance data analysis tasks, but the ultimate decision should rest with trained HR personnel. The combination of human oversight with AI technology maintains fairness while upholding accountability requirements, which both GDPR and Irish employment law enforce.

The second recommendation states that organizations should use an incremental evidence-based approach when implementing changes. Significant changes to HR systems generate opposition from employees and cause operational breakdowns. High-impact areas such as talent sourcing for difficult positions and voluntary turnover prediction should be tested through targeted pilot programs to generate measurable results while organizations learn to adapt gradually. AIB uses a single recruitment pipeline to start with, before model refinement based on feedback, and before expanding the system to additional roles.

The integration of compliance requirements must occur as AI systems are being designed. The development and deployment of AI systems in Ireland requires the integration of GDPR principles with Data Protection Act requirements and Employment Equality Acts obligations at every stage. High-risk AI applications need to undergo Data Protection Impact Assessments (DPIAs) before launch, while bias audits should be conducted regularly as standard procedure. The practice of Workhuman provides clients with specific control over data access and retention through its design, which demonstrates compliance-by-design in action.

Stakeholder engagement at the beginning of the process becomes a necessity. The design and deployment of AI tools require employee involvement, along with trade union representatives and diversity and inclusion officers, to ensure these systems align with both organizational values and workforce priorities. Organizations that

listen to worker input, as noted by ICTU (2021), will build employee trust, which leads to better adoption of new systems.

HR teams need to develop AI literacy skills as their final critical step. The professionals need to grasp the operational mechanisms of AI systems as well as the constraints of algorithmic results and all relevant legal and ethical guidelines for AI use, according to CIPD (2023). Organizations face two potential risks when employees lack AI understanding: they either become too dependent on AI systems or develop complete distrust, which blocks AI from delivering its possible advantages.

#### **6.3 Frameworks for Implementation**

The research shows that organizations operating in Ireland's complex regulatory environment should use a principle-based framework instead of multiple adoption models.

The 4P + H model — Purpose, Pipelines, Protections, People, and Human Oversight. Provides one such adaptable structure. A defined purpose helps organizations use AI adoption to achieve strategic objectives instead of treating technology as an end in itself. Strong data pipelines maintain quality and reduce bias, while protections, including security measures, bias audits, and transparent processes, uphold compliance. The people element ensures that both HR professionals and employees are supported through training and communication. The implementation of human oversight ensures that essential HR decisions remain under human control instead of algorithmic control (Wachter, Mittelstadt, and Floridi, 2017).

The framework remains useful, but organizations should not enforce it as a strict set of rules. Organizations need to modify these principles according to their organizational size, sector, and current AI development stage. A small Irish retail chain using AI for scheduling needs a less complex governance system than a multinational bank that uses AI in executive hiring.

## **6.4 Future Research Directions**

The research indicates multiple areas that require additional investigation.

The research requires additional longitudinal studies to understand the complete impact of AI on HR outcomes. The short-term advantages of AI in efficiency and decision-making are documented in this dissertation. Still, researchers have not

studied how AI affects employee retention, satisfaction, and diversity levels in the long term (Marler and Boudreau, 2017). The study of these outcomes over multiple years would provide more detailed information about AI's lasting effects.

More research should be conducted with an Irish focus to address this need. The Irish labour market presents a distinctive environment for AI adoption because it combines robust worker protections with EU regulatory compliance and an expanding technology sector. Research comparing public sector HR systems of the Health Service Executive (HSE) to private sector tools would show essential differences between their adoption approaches and results.

Research opportunities exist to study how multinational employers in Ireland will adapt to changing EU AI Act regulations (European Commission, 2024). Research studies should investigate how organizations implement standardized AI practices across different jurisdictions while maintaining compliance with local labor regulations.

The current situation demands immediate research into employee views regarding HR processes managed by AI systems. Organizational leaders consider AI to boost productivity, but their employees might express worries about privacy issues and concerns over fairness and transparency. Organizations need to conduct qualitative studies about employee experiences in AI-mediated recruitment, performance reviews, and career development to create systems that balance efficiency and compliance with employee trust and value (Brougham and Haar, 2018).

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