

## Artificial Intelligence (AI) and Automation in Human Resources : Shifting the Focus from Routine Tasks to Strategic Initiatives for Improved Employee Engagement

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### ABSTRACT

This study examines how implementing artificial intelligence (AI) in human resource management (HR) impacts employee engagement and operational efficiency. By automating tasks like data management, scheduling, and payroll, AI enables HR teams to focus on strategic initiatives such as talent management and culture development. Using a descriptive qualitative approach and literature review, the research finds that AI adoption improves operational efficiency by 30% and enhances employee engagement through personalized experiences and real-time feedback. Additionally, AI supports better strategic decision-making with predictive employee data analysis. However, challenges include employee resistance and the need for HR retraining. For optimal results, companies should strengthen internal communication and establish supportive policies that enhance engagement and well-being through AI integration.

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## **INTRODUCTION**

Artificial intelligence (AI) and automation technologies have evolved rapidly in the past few decades. AI, which refers to the ability of machines to perform tasks that require human intelligence, has now been applied in various industry sectors. In the context of human resources (HR) management, AI is used to streamline administrative processes that previously required large amounts of human labor. For example, AI-based systems are now capable of handling data management, automated scheduling, and employee training through adaptive learning platforms.

According to a report from (McKinsey & Company, 2021), nearly 56% of companies have adopted AI in some aspect of their operations, including HR. The report revealed that companies that implement AI are able to increase operational efficiency by up to 40%, especially through the automation of repetitive and administrative tasks. This technology also enables companies to adapt quickly to the increasingly complex and dynamic changes in the global labor market. In the HR field, AI technology is expected to not only streamline processes but also improve the quality of human resource management, from recruitment to employee performance assessment.

With the advent of AI, the role of HR is no longer limited to administrative management such as payroll processing, attendance management, or manual recruitment form filling. AI is changing the HR landscape by automating these tasks, which gives HR the opportunity to focus on more strategic initiatives. These strategic initiatives include developing company culture, managing talent, and improving employee engagement and satisfaction, all of which have a direct impact on productivity and business sustainability.

Josh Bersin (2021), a leading expert in HR and technology, emphasizes that modern HR must evolve into a more strategic role, focusing on data-driven decision-making and managing employees through a more personalized approach. AI technology allows HR to use predictive analytics to assess employee development needs, design customized training programs, and manage individual career paths based on real-time measured performance data. HR can also move from being a policy executor to a strategic consultant within the organization, whose role is to ensure that HR policies align with long-term business goals. This includes building talent retention strategies, developing leadership, and managing diversity and inclusion in the workplace. As such, AI not only improves operational efficiency but also gives HR more time and space to drive strategic initiatives that create greater value for the company.

In recent years, companies have increasingly relied on AI to manage complex and demanding HR processes. One of the areas that has undergone the most transformation is recruitment. Today's AI algorithms can scan thousands of job applications in seconds, using natural language processing (NLP) to match candidate skills with relevant job descriptions (Efrita Norman & Enah Pahlawati, 2024). AI can also conduct automated interviews through chatbots that have been trained with standard interviewing techniques.

Performance appraisals also become more measurable and real-time with the help of AI. Traditional performance appraisal systems are often limited to

annual or quarterly evaluations, but with AI, HR can automatically collect employees' daily performance data. This allows companies to provide faster and more personalized feedback, and customize individual career paths based on that data.

In addition, AI plays an important role in improving employee engagement through personalization of the work experience. AI can analyze employee behaviors and preferences, provide recommendations regarding relevant training, and predict the risk of burnout based on work patterns. This helps companies create a work environment that is more responsive to employee needs, which in turn can increase retention and job satisfaction.

### ***Problem Formulation***

The development of artificial intelligence (AI) and automation technologies in human resource management (HR) has changed the way HR teams work, especially in shifting their focus from routine tasks to strategic initiatives that are more valuable to the company (Hafidz, 2023). Previously, HR teams often spent a lot of time handling administrative tasks, such as employee data management, interview scheduling, and payroll processing. However, with the advent of AI and automation, these tasks can be completed more efficiently and accurately by automated systems, allowing HR teams to concentrate more on long-term strategies, such as developing company culture, improving employee engagement, and succession planning.

The use of AI in HR processes also has a significant impact on employee engagement (Alvina Dwi Suwandita et al., 2023). AI technology can provide a more personalized and targeted work experience, with employee data analysis that can predict training needs, career progression, and individual preferences. AI also helps speed up the employee performance evaluation process and provides real-time feedback, so that employees feel more engaged and better supported by the company. However, implementing AI in HR also poses challenges, such as employee resistance to new technology and the potential for over-reliance on automated systems. Therefore, it is important to understand how AI can be effectively applied to improve employee engagement and identify opportunities and challenges in the implementation process.

### ***Research Objectives***

This research aims to analyze how the application of artificial intelligence (AI) in human resource management (HR) processes can improve employee engagement. With the implementation of AI, processes such as recruitment, onboarding, and performance appraisal become more efficient and personalized. This allows for a more targeted and relevant work experience for each employee, thus driving higher engagement. Employees who feel that their career development and well-being are taken care of by the company tend to be more committed and productive. This research will examine examples of companies that have successfully applied AI in improving employee engagement, as well as how personalization resulting from AI-powered data

analysis can help employees feel more valued and motivated to contribute more towards company goals.

In addition, this research will also identify the challenges and opportunities in the implementation of AI and automation in HR processes. One of the main challenges is employee resistance to the use of new technologies and potential job reductions due to automation. However, the opportunities arising from the implementation of AI are also significant, especially in terms of time savings, costs, and improved operational efficiency. AI provides opportunities for HR to develop better talent management strategies, design more effective succession planning, and predict the future needs of the organization through predictive analytics. Recent studies show that companies that successfully integrate AI in HR experience efficiency gains of up to 30%, illustrating the huge potential of AI for the future of HR management.

## **THEORETICAL REVIEW**

### ***AI and Automation in HR***

Artificial Intelligence (AI) in human resource management (HR) refers to the use of machine learning algorithms, natural language processing (NLP), and predictive data analysis to automate and improve various HR processes. AI in HR is designed to ease administrative burdens that are typically done manually, as well as provide deeper data-driven insights for strategic decision-making.

In general, AI in HR is used to perform functions such as candidate screening through keyword matching algorithms, employee behavior analysis, and succession planning. Gartner (2023) notes that 43% of HR leaders have explored or implemented AI to improve operational efficiency. Thus, AI not only automates tasks that are usually time-consuming, but also helps HR to focus on tasks that are more strategic and have a greater impact on the organization.

AI also enables much faster and deeper data analysis processes, such as employee performance pattern analysis and turnover prediction. By using AI-based predictive models, HR teams can make faster and more informed decisions regarding employee development and talent retention. Forrester (2023) highlights that AI technology can reduce the time to make critical HR decisions by 30%, increasing overall HR productivity (Dodani, 2024).

Automation in HR refers to the use of technology to automatically perform routine tasks, such as recruitment, performance appraisal, training, and employee engagement, that were previously managed manually. In the context of recruitment, AI enables the use of more sophisticated Applicant Tracking Systems (ATS), where algorithms are able to automatically process thousands of CVs and match them to job requirements based on relevant keywords, experience and skills.

Automation also plays an important role in performance appraisal. By using real-time data-driven analysis, HR can conduct more accurate evaluations of employee performance, providing faster and more relevant feedback. AI can

also detect patterns in employee performance and help management provide more personalized and targeted solutions for employee development.

In addition, employee training becomes more effective through AI-based systems that are able to provide training tailored to individual needs. AI-based chatbots and learning platforms allow employees to gain access to training materials at any time, as well as get training recommendations that suit their career needs (Pratama et al., 2023).

On the employee engagement aspect, AI provides tools to monitor engagement levels through automatable surveys and predictive analytics that help HR anticipate potential problems before they arise. Sarjito (2023) highlights how AI assists companies in creating a more personalized work experience by providing solutions that match individual preferences, ultimately increasing employee engagement and retention. Overall, AI and automation in HR not only help companies save time and money, but also provide opportunities to improve the quality of work experience for employees, reduce turnover, and facilitate faster, data-driven decision-making.

### ***Strategic Initiatives in HR***

Strategic initiatives in HR refer to policies and actions undertaken by human resource management to achieve the organization's long-term goals that are aligned with key business strategies. These include measures such as talent development, succession planning, improving employee engagement, managing diversity, as well as implementing technology for operational efficiency. Unlike routine administrative tasks, strategic initiatives are focused on increasing employee value to the organization through leadership development, talent retention, and the creation of a positive work culture.

According to Ulrich et al. (2012), strategy-focused HR must be able to navigate between daily operational needs and long-term strategic needs. With this, the role of HR is not only as an administrator but also as a strategic partner that supports company growth through talent management, organizational transformation, and future-oriented data-driven decision-making. This includes in-depth data analysis of employee trends, improved engagement, and the development of reward systems that motivate employees to work more productively.

The use of AI and automation in human resource management has changed the way HR teams work, allowing them to shift focus from routine administrative tasks towards more in-depth strategic initiatives. Previously, a lot of time was spent by HR handling tasks such as scheduling, payroll, employee data management, and manual recruitment processes. However, with the advent of AI, these tasks can now be automated, reducing the manual workload and freeing up more time for HR to focus on more important things, such as talent development and employee performance management (Erwin et al., 2024).

According to Irawan et al. (2024), automation of routine HR tasks such as data processing and recruitment allows HR teams to allocate their resources and time to focus on initiatives that support organizational sustainability.

Strategic initiatives such as succession planning, developing personalized training programs, and increasing employee engagement become easier to do when AI takes over administrative tasks. Moreover, with the help of AI data analysis, HR can make smarter decisions based on real-time employee data, improving efficiency in the execution of long-term strategies.

Farhansyah (2024) also added that automation allows companies to increase HR productivity and capacity in handling employee management more holistically, so that HR teams can focus more on improving the quality of employee experience, workplace innovation, and strategic planning to retain the best talent in the company.

### ***Employee Engagement and Work Experience***

Employee engagement refers to the emotional level and commitment of employees to their work and organization. Engaged employees are not only satisfied with their jobs but also motivated to contribute more in achieving organizational goals. According to Gallup in Hastuti (2022), employee engagement is closely correlated with productivity, quality of work, and employee retention rates. Engaged employees tend to have a deeper bond with the company, show loyalty, and are more proactive in finding solutions and improving their performance.

Research from Bakker & Demerouti (2007) on the Job Demands-Resources Model states that employee engagement can be influenced by the availability of supportive job resources, such as autonomy at work, recognition of performance, and development opportunities. Engagement also serves as a protector against stress and burnout, creating a more positive and productive work environment.

The use of AI and automation in HR can significantly improve employee engagement by increasing process efficiency, personalizing the work experience, and providing real-time feedback. With automation, repetitive administrative tasks such as scheduling, payroll processing, and data management can be completed faster, allowing HR teams to focus on talent development and improving employee engagement. Deloitte (2022) shows that companies that implement automation in HR experience an increase in employee satisfaction and engagement of up to 25%, as employees feel more supported and valued by systems that provide quick and personalized solutions.

In addition, AI provides opportunities for HR to conduct predictive analysis of employee engagement. Through real-time data monitoring, such as engagement surveys or the use of interactive software, HR can identify engagement issues earlier and respond more appropriately. PWC (2022) reported that AI helps in collecting and analyzing employee feedback in greater detail, allowing companies to provide appropriate actions to improve employee well-being, which in turn increases engagement levels.

Furthermore, Forrester (2023) emphasized that with AI, employees' work experience becomes more personalized. For example, AI can recommend training programs tailored to employee needs, provide immediate feedback,

and offer targeted career development options. This creates a greater sense of ownership and increases employee commitment to the company.

## RESEARCH METHODOLOGY

This research uses a qualitative descriptive approach, which aims to provide an in-depth description of the phenomenon under study through literature review. Qualitative descriptive methods aim to explore and understand the meaning behind the use of AI in HR from both academic and practical perspectives, as well as its impact on employee engagement and HR team performance. Qualitative descriptive is often used when the research focus is to describe a phenomenon based on in-depth information gathering through relevant textual sources (Subakti et al., 2020).

Desk studies allow researchers to collect data without the need to conduct direct field research, but rather through analyzing widely available literature, including journal articles, books and industry reports. This is important in research involving technological innovations such as AI, where diverse and rich data sources are a key foundation for understanding the impact of AI in the context of human resource management.

According to Creswell (2009), literature review is an effective approach in research that focuses on existing theory or practice, and provides an opportunity for researchers to review the results of research conducted by other researchers. It also helps to avoid unnecessary repetition of research and allows for a more in-depth analysis of topics that have been widely covered in the scientific literature.

## RESULTS AND DISCUSSION

### *Recent Case Study: AI Implementation in HR in Indonesian Companies*

The implementation of AI in human resource management (HR) in Indonesia has started to trend in recent years. A number of large companies have successfully adopted AI to increase HR efficiency, improve recruitment processes, increase employee engagement, and improve HR team performance. The following are some examples of companies in Indonesia that have successfully implemented AI in HR and its impact.

#### *1. Gojek : Recruitment Automation and Talent Management*

As one of the largest technology companies in Indonesia, Gojek has integrated AI into their HR processes, especially in terms of recruitment. Gojek uses AI and machine learning to automatically process thousands of job applications, screen candidates based on predefined qualifications, and provide recommendations to hiring managers (Kurnianingrum et al., 2021). The system also analyzes candidate behavior patterns based on historical data, such as work experience and skill sets, to match them with the company's needs.

As a result, Gojek reports an increase in the speed of the recruitment process, a reduction in candidate selection time, and an improvement in the quality of candidates recruited. With AI, HR teams can focus on developing more strategic and in-depth talent management programs, while administrative

tasks, such as initial screening of applications, are automated. New employees also get a better and more personalized onboarding experience thanks to the use of AI that helps them understand the company culture and get access to training that suits their needs.

### *2. Telkom Indonesia : AI in Performance Appraisal and Employee Development*

Telkom Indonesia, as the largest telecommunications company in Indonesia, has also adopted AI to manage employees and improve their engagement. One of the biggest AI implementations is the use of AI in performance appraisal CorpU (2024). By analyzing performance data in real-time, Telkom's AI system provides automatic and personalized feedback to employees on their performance. This enables more objective and continuous assessment, and provides information that managers can use to facilitate employees' career development more effectively.

Telkom also uses AI in employee development programs. The AI system can identify training needs based on performance data, recommend relevant training programs, and even monitor employee training progress. As a result, Telkom employees feel more engaged as they get quick and personalized feedback on their performance, as well as better support for their career development. This increases employee motivation and engagement, and helps the company retain top talent.

### *3. Bank Mandiri : AI for Talent Management and Employee Engagement*

Bank Mandiri, one of the largest banks in Indonesia, has leveraged AI to increase employee engagement and improve talent management. With AI, Bank Mandiri manages employee data more effectively, from recruitment to career management. AI is used to monitor employee engagement on an ongoing basis, identify early signs of burnout, and recommend appropriate interventions, such as wellness programs or retraining.

In addition, AI at Bank Mandiri enables personalization of the work experience for each employee, including in terms of reward programs and career development. This not only improves HR operational efficiency, but also makes employees feel valued and supported by the company, which ultimately improves employee retention and satisfaction. According to internal reports, Bank Mandiri saw a significant increase in employee engagement and a reduction in turnover rates after the implementation of AI (Zefanya Aprilia, 2024).

### ***Impact of AI on Employee Engagement and HR Team Performance***

The use of AI in HR at the above Indonesian companies has had a significant positive impact on employee engagement and HR team performance. By automating administrative tasks such as application screening, performance appraisals, and employee engagement monitoring, HR teams can focus more on more important strategic tasks, such as talent development and succession planning.

In addition, using AI to personalize the employee work experience increases satisfaction and engagement levels. AI enables companies to provide

faster feedback, identify employee needs earlier, and provide solutions accordingly. As a result, employees feel more supported by the company, more engaged in their work, and more loyal to the organization.

### ***Shifting Focus from Routine Tasks to Strategic Initiatives***

An analysis of companies that have adopted AI in human resource management (HR) shows that this technology has played a key role in shifting the focus of HR teams from routine administrative tasks to more strategic and long-term initiatives. Routine tasks such as scheduling, salary processing, attendance management, and employee data management, which previously consumed a lot of time and human resources, can now be fully automated through AI and Robotic Process Automation (RPA) technologies.

According to Deloitte (2022), the automation of these tasks allows HR to focus more on strategic endeavors, such as corporate culture development, succession planning, and employee development through more targeted training. HR can now play a more integral role in ensuring employees have a clear career path, and help build an innovative and inclusive work culture. For example, time saved from administrative tasks can be used to design initiatives related to employee well-being or formulate stronger diversity and inclusion policies.

### ***The Impact of Automation on HR Efficiency and Productivity***

With automation, not only the HR team benefits, but also the entire organization. Gartner (2023) found that the use of AI in HR management can increase productivity by 30%, with significant time savings in administrative processes. Tasks that used to take days can now be completed in minutes, such as CV screening, payroll, and employee attendance monitoring. Automation not only reduces administrative workload, but also reduces the potential for human error that often occurs in manual tasks.

In addition, the use of AI in recruitment also speeds up the process of hiring new employees. For example, the use of AI-based chatbots and application processing systems allows companies to process thousands of job applications more efficiently. In this case, AI not only speeds up the process, but also improves the quality of candidates recruited, as the technology is able to deeply analyze candidate data, match their skills with the company's needs, and even predict their fit with the organization's culture.

### ***Impact on HR Strategic Initiative Development***

One of the biggest impacts of automation is the increase in time and resources that HR can use to focus on strategic initiatives. Forrester (2023) notes that HR teams that have adopted automation now have more time to design and execute talent development programs, engage employees in personalized training programs, and formulate employee engagement strategies. It also allows HR to conduct more in-depth long-term planning, such as succession planning and talent management more systematically.

These strategic initiatives are not just about employee development, but also include transforming company culture. For example, with more time available, HR teams can focus on developing a more inclusive and diverse work environment, as well as ensuring that company policies support overall employee well-being. Automating routine tasks allows HR to have more capacity to identify and respond to employee needs more proactively, creating stronger engagement and retaining quality talent.

### ***Increased Employee Engagement through AI***

The use of AI in HR enables companies to provide a more personalized and adaptive work experience, which in turn increases employee engagement and satisfaction. One of the main ways AI supports this is through real-time performance appraisals and immediate feedback. AI helps HR managers monitor employee performance more continuously and automatically, reducing reliance on annual appraisal cycles that are often perceived as rigid and inflexible. With AI-based systems, employees can receive timely feedback, allowing them to improve their performance immediately and feel supported by the company.

These real-time performance appraisals are helpful in maintaining employee engagement as immediate feedback is often more relevant and easy to implement compared to annual appraisals. Companies that use AI to support performance appraisals see an increase in employee engagement as real-time feedback gives them the opportunity to feel more valued and get more personalized guidance for career development.

In addition, AI allows companies to personalize employee training and development programs. Based on data collected from daily interactions, AI can recommend training courses that suit employees' needs. This personalization is invaluable in building employee engagement, as they feel the company is paying attention to their individual needs. PWC (2022) emphasizes that personalization through AI increases employee satisfaction and engagement by providing a more customized work experience, increasing a sense of belonging and motivation.

Furthermore, AI can also predict employee engagement based on behavioral patterns and historical data, such as digital interactions or absenteeism. This way, companies can identify disengagement risks early and intervene accordingly, for example by offering support or wellness programs. This proactive approach increases employee engagement and helps reduce turnover in the workplace.

### ***Positive Impact on the Company***

The use of AI in human resource management (HR) offers many benefits to companies, especially in terms of improving operational efficiency. By automating repetitive administrative tasks, such as payroll processing, employee data management, and scheduling, AI helps reduce manual workload and speed up the completion of tasks that previously took longer. The implementation of AI in HR can increase efficiency, allowing HR teams to focus on more strategic initiatives.

In addition to enhancing efficiency, AI also helps minimize administrative mistakes. For instance, AI-driven automation systems lessen the likelihood of human errors in employee data processing tasks, such as salary or attendance calculations. This leads to improved accuracy while reducing financial and legal risks associated with data errors. Companies that implement AI experience a notable decrease in administrative mistakes as automation enables better data validation and faster auditing processes.

In addition, AI frees up time for HR teams to focus on more in-depth employee development strategies. With less routine tasks, HR can be more involved in designing talent development programs, succession planning, and employee retention strategies that support company growth. This is especially important in the modern work environment where innovation and talent management are top priorities for many companies.

### ***Challenges and Obstacles***

While AI offers many benefits, challenges in its adoption remain. One of the main barriers is employee resistance to new technology. Employees, especially those who have been working with manual systems for a long time, may feel anxious about losing their jobs or feel threatened by technological change. This resistance to AI is often fueled by fears that automation will replace human roles entirely, despite the fact that AI is designed to support human tasks, not replace them.

In addition, there is a need to retrain HR teams to effectively manage and interact with AI systems. Automation and AI-based systems require new skills, such as the ability to analyze data and use complex software. This means companies must invest in the training and development of their HR employees so that they can utilize the full potential of AI. Lack of adequate training can be a major barrier in the adoption of new technologies, and without proper training, the benefits of AI will not be fully achieved.

## **CONCLUSIONS AND RECOMMENDATIONS**

### ***Summary of Findings***

The implementation of AI in human resource management (HR) processes can significantly streamline routine and administrative tasks, such as employee data management, scheduling, payroll, and recruitment processes. With this automation, HR teams gain more time and space to focus on more valuable strategic initiatives, such as talent development, succession planning, and improving employee engagement. Studies show that AI not only improves operational efficiency, but also has a positive impact on productivity and employee engagement. HR teams that are freed from routine tasks can be more engaged in long-term strategies that support organizational development, such as improving employee experience and structuring policies that support their well-being. This ultimately contributes to improved employee retention and more sustainable company growth.

### ***Practical Implications***

For companies looking to adopt AI in HR processes, it is important to consider investing in technology training for employees. Such training should include the use of AI to support not only task automation, but also more complex strategic decision-making. AI can provide predictive analytics and real-time data that help HR make smarter decisions regarding talent management, employee retention, and corporate culture development. Companies need to ensure that AI is not only utilized as an automation tool, but also as a driving innovation in people management, enabling HR teams to focus on long-term strategies that support overall business success.

Overall, the use of AI in HR offers a great opportunity for companies to improve efficiency, productivity, and employee engagement, provided that companies are willing to invest in new skills and support the cultural changes required to fully utilize the potential of this technology.

One of the major challenges in the adoption of new technologies such as AI is internal resistance from employees and management. For successful implementation of AI in HR, companies must strengthen internal communication. Transparency in communication regarding the benefits, goals, and impact of AI on employee roles is essential. McKinsey & Company (2021) notes that technological change often fails due to a lack of clear and targeted communication. HR teams should explain to employees how AI will help ease their administrative workload, not replace their roles. This will help reduce employee anxiety about potential job loss and increase acceptance of new technologies.

In addition, companies need to hold regular training and socialization sessions, where employees are exposed to how AI works and how they can leverage this technology to improve their work performance. By providing a platform to discuss concerns and expected benefits of AI, companies create an environment that supports change and strengthens employee engagement in the digital transformation process. Successful use of AI requires active participation from employees, and this can only be achieved through continuous and transparent communication.

Along with AI implementation, companies need to develop policies that support employee engagement and well-being in the workplace. AI can serve as a tool to improve employee engagement, but to maximize this potential, clear internal policies need to be designed. These policies can include using AI to personalize employee well-being programs based on individual needs and preferences. For example, AI can be used to analyze employee health data, provide recommendations for wellness programs, and provide faster and more efficient access to mental and physical health resources.

AI can also improve work-life balance by automatically managing working hours and monitoring employee engagement levels in specific projects. This helps HR managers to provide appropriate interventions before employees experience burnout. In addition, a policy that supports continuous training for HR teams is also essential so that they can effectively manage AI systems and understand how to utilize them to holistically improve employee well-being.

These policies should also ensure that AI is used ethically, by avoiding bias in the employee assessment process as well as ensuring data privacy is maintained

### **FUTURE STUDY**

Examine ethical concerns around employee data usage, focusing on biases in AI algorithms, data privacy, and the implications of AI in employee assessment. This could help develop frameworks that ensure ethical AI practices in HR.

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