

Navigating The AI Revolution In HRM: A Sentiment Analysis Perspective

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ABSTRACT

The current research aims to investigate artificial intelligence's influence on the field of human resource management with special attention to sentiment analysis. While the capabilities of artificial intelligence continue to evolve, it represents an exciting yet problematic concept for many companies. The current article treats artificial intelligence technologies and sentiment analysis, in particular, as catalysers for the transformation of HR practices. The research puts a specific focus on how artificial intelligence can be facilitated for the automation of routine tasks, interviews, and preselection of CVs. The paper also pays attention to the ethical concerns and challenges related to the use of artificial intelligence in HR. In such a context, the user reviews sentiment analysis of the we360.ai application, as one of the critical cases for the current research, which helps facilitate AI to measure employee productivity and integrate it in HR strategies. In conclusion, the article claims that artificial intelligence is a significant but sensitive advancement in HR, and businesses should be cautious in using it and fully adapt it. The findings of the current research paper can help thinkers, managers, and policy makers see the central observations about the future integration of AI into HR in the era of digital technologies.

Keywords: Artificial Intelligence, Human Resources Management, sentiment analysis, ethical considerations, employee productivity

1. Introduction

Artificial Intelligence can be viewed as a transformative force that restructures the homogenous landscapes of modern Human Resources Management. The rapidly increasing pace of its capabilities results in viable opportunities to improve the effectiveness of decision-making processes, automated routine tasks, and boosts employee sentiment through better understanding. However, this rapid integration also poses critical challenges of ethical considerations, algorithmic biases, and privacy concerns that also need to be addressed. In this study, the study aims to highlight the transformative potential of artificial intelligence in HRM. While doing so, the study hopes to underline the critical need of ethical mechanisms that should be developed within AI. The assumption that to obtain the full benefits of AI in HRM as well as protect the ethical standards and employee welfare, we need to make it a more human-centric initiative in the age of digital transformation.

Building on the foundation laid by previous research, the candidate role of artificial intelligence (AI) is well documented in human resource management (HRM), with sentiment analysis as a key tool to gain nuanced insights from employee feedback. There is mention of emergence in Taherdoost & Madanchian (2023) highlighted the usefulness of AI in competitive research through sentiment analysis, mentioning how it is helpful in understanding market trends and employee attitudes, sentiment polarity and thematic analysis by focusing on data. Similarly, Mital et al. (2023) highlighted the role of AI in enhancing employee engagement through real-time analytics, showing huge improvements in employee satisfaction parameters. Furthermore, analysing employees' sentiments is a major issue given the lack of data on the topic, and although some researchers have indicated the benefits of using AI for conducting skills' inventories, the revealed changes in decision-making skills or the reduction in employees' turnover rates were not properly described according to this research. Implied, more critical discussions of the aggregation of AI into HRM on employees' well-being, ethical frameworks, or measures to take in order, include prevention of the issues with bias and privacy, are still missing in the field. Overall, I believe these issues will be known in a few years as currently, AI technologies

are undergoing rapid development and it is still difficult to predict the transformation the ERA will undergo as a result of this development. Additionally, new AI tools will emerge within a few years and will overcome the problems associated with sentiment analysis, and these tools will be used to analysis the sentiment of the ideas, opinions, and recommendations of employees.

Our study utilizes this technological advancement, offering a qualitative method that combines proximate analysis with user reviews. This dual access allows for an in-depth exploration of the impact of AI on employee well-being and fosters a positive organizational culture. By incorporating these new tools and concepts, the research explores countervailing views on the identified gaps, contributing to the latest conceptualizations of the ethical deployment of AI in HRM and its long-term impacts on the workplace. Through this, the study not only build on the knowledge base established by prior work but also create a guidance for future research in this dynamic area. This study aims to fill an important gap in the literature by looking at the overall impacts that AI applications have on the psychological and cultural dimensions of the workplace.

Our study presents a qualitative research design sentiment analysis and ethical investigations with AI tools such as We360.ai, located in organizations. This strategy offers the author an opportunity to reveal an intricate, interconnected, and somewhat controversial nature of the effect of AI integration in HRM, as well as place an even greater emphasis on the existing ethical implications and the accompanying challenges. Moreover, the approach that is used in the research paper defines the latter as unique, not the least due to the fact that it provides a unique framework for HRM professionals and policy makers to use AI as a tool for promoting ethics in the work environment.

Therefore, the study is important for the target audience beyond the specified previous context, as it sets a groundwork for the introduction of AI to the process of HRM. By directly addressing ethical concepts, the study aims to promote a more humane and ethical approach to the use of AI in the workplace. By doing so, it leaves more room for leaders to responsibly navigate the digital transformation of the workplace. The results of our research are likely to shape policy, inform best practices, and ultimately promote the intersection between human workers and AI technologies and the evolving workplace role.

Artificial intelligence (AI) has gained favor as a transformative force in human resource management (HRM), especially from the perspective of sentiment analysis. AI technologies improve competitive research through performance studies and enhance it through nuanced sentiment analysis (Taherdoost & Madanchian, 2023), nurture employee engagement with real-time analytics (Mittal, Jora, Sodhi, & Saxena, 2023), and systematizes employee participation in management and strategic decisions in the United States (Popo-Olaniyan et al., 2023). Additionally, the application of sentiment analysis in tourism shows the potential of AI, which derives insights from online content, to impact a destination's reputation and performance (Alaei, Becken, & Stantic, 2019). However, stored factors such as compatibility and management support are important for effective integration of AI in HRM (Tuffaha, 2022). Despite benefits such as increased efficiency, improved decision-making, and better planning profit shifting (Tewari & Pant, 2020; Cormarkovic & Dražeta, 2022; Saranya, 2022), challenges such as ethical concerns, risks of dehumanization, and potential biases pose challenges to HRM. This emphasizes the need for a balanced, ethical, and transparent approach to AI (Tambe, Cappelli, & Yakubovich, 2019; Konovalova, Mitrofanova, Mitrofanova, & Gevorgyan, 2022; Prasanna Tambe et al., 2019). The transformative impact of AI on HRM has been widely analysed in the existing literature, especially from a sentiment analysis perspective, but there appears to be an unmet need for a thorough study on the long-term impacts of AI integration on employee well-being and organization culture. Is. Additionally, further studies are needed on the development and implementation of ethical frameworks and guidelines set by AI in HRM practices. Here, concerns about delinquency, risks of dehumanization, and bias require in-depth study. Exploring these areas will tell us how to maintain a human-centered approach in the changing landscape of HRM, ensuring that the benefits of AI do not undermine ethical standards or the fundamental value of human judgment and input.

1.1 Objectives of the study:

Objective 1: To evaluate the efficacy of positive sentiment analysis within the We360.ai application, providing insight into its potential for measuring employee productivity and making strategic decisions in human resource management.

Objective 2: To explore, through We360.ai's review, the specific ethical considerations and challenges that organizations face in integrating AI technologies responsibly and effectively, along with negative sentiment analysis of AI in HRM. The objective is to provide functional estimates for.

2 Methods

2.1 Study Design:

The study took an in-depth look at the transformative potential of artificial intelligence (AI) in human resource management, focusing on sentiment analysis. The objective of this research was to evaluate their efficacy and ethical considerations in implementing AI technologies, especially through sentiment analysis, into HRM

practices. The We360.ai application was used as the main case study to thoroughly analyze the role of AI in HR practices and try to handle the associated ethical challenges.

2.2 Data Collection

The primary data source for this study was collected through web scraping method. 109 reviews were carefully selected from an online platform to provide a complete representation of users' experiences. These reviews provide valuable experiences of application performance and user sentiment, which are important for understanding the consequences of AI in HRM.

2.3 Data Analysis

To analyze the collected data, we used NVivo 12 software. From this perspective, we developed a structured testing technique of positive, negative, and neutral feelings. Each review involved a rigorous pre-processing step to enhance data quality, followed by sentiment coding. We generated tree maps and word clouds for positive and negative sentiment, identifying detailed information and trends for particular words and sentences. This visualization technique helped identify important themes and trends in the sentiment data.

2.4 Legality and authenticity:

Several measures were taken to ensure the validity and authenticity of our results. Firstly, attention was drawn to established sentiment analysis methods to establish a sentiment coding framework that would allow a stable and accurate classification of sentiments. Second, the use of NVivo 12 software, a well-known tool for qualitative data analysis, helped ensure the methodological implications of our study. The systematic data collection and analysis procedures adopted in this research were designed to minimize computations and increase the reliability of the results.

In this research, we conducted quality analysis of user-generated content, specifically using We360.ai. This method allows us to deeply study users' views towards AI in HRM with emotions.

2.5 Ethical consideration:

Considering the ethical questions of using AI in HRM, we followed ethical research standards. We followed strict rules to ensure confidentiality and reliability of data sources. Furthermore, we critically studied the ethical challenges involved in the study, which are related to the application of AI in HR practices. Thus, we contribute towards realistic and conscious use of AI technologies to promote responsible and informed application.

3.Result

Following table1 and figure-1 represents sentiment coding references.

Table 1: Compared by number of sentiment coding references

Codes	Number of coding references	Number of items coded
AI in HR	1059	1
AI in HR - Mixed	33	1
AI in HR - Negative	24	1
AI in HR - Neutral	849	1
AI in HR - Positive	153	1

Source: Authors own source

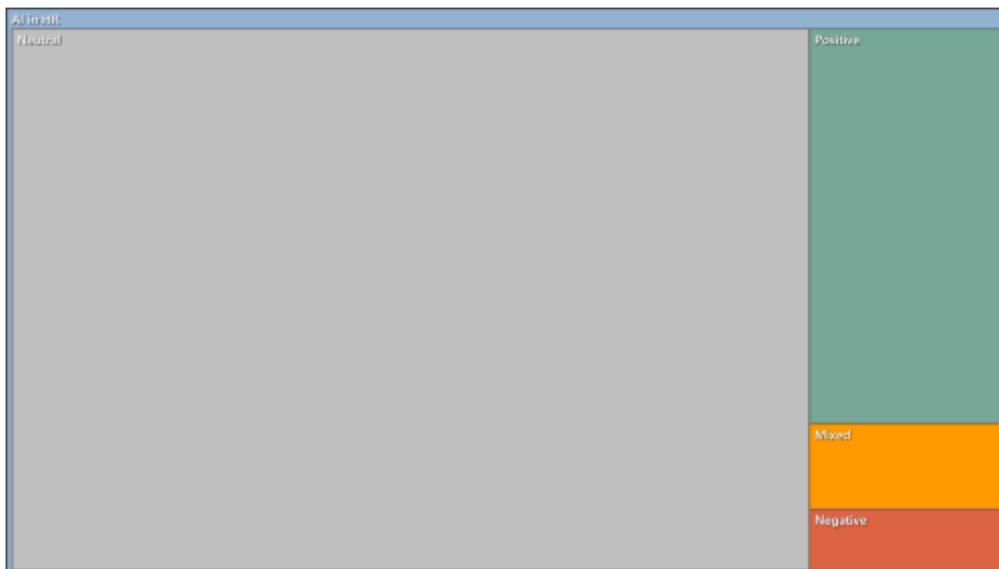


Figure 1: Compared by number of sentiment coding references

Table-1 and figure-1 categorizes sentiment into five distinct codes related to AI in HRM: AI in HR, AI in HR - Mixed, AI in HR - Negative, AI in HR - Neutral, and AI in HR - Positive. Each category is accompanied by two key figures: the number of coding references and the number of items coded.

AI in HR (1059 coding references, 1 item coded): This category likely represents the overarching sentiment regarding the integration of AI within HR practices without specifying the sentiment's nature. The high number of references indicates a strong interest and considerable discussion around the topic, suggesting AI's significant impact on HRM.

AI in HR - Mixed (33 coding references, 1 item coded): The mixed sentiment category, though relatively small in comparison, suggests that there are nuanced views regarding AI in HRM. These could represent reviews or opinions that see both the positive and negative sides of AI integration, indicating complexity and diversity in perceptions among users or stakeholders.

AI in HR - Negative (24 coding references, 1 item coded): The negative sentiment towards AI in HRM, while being the least in terms of references, underscores the existence of concerns or dissatisfaction among some users or observers. This could relate to issues such as privacy, effectiveness, or the potential for AI to misinterpret human nuances.

AI in HR - Neutral (849 coding references, 1 item coded): A substantial number of references were coded as neutral, highlighting discussions or mentions of AI in HR that neither explicitly praised nor criticized the technology. This could imply a cautious or observational stance among many users, possibly reflecting uncertainty or the early stages of AI integration within HR practices.

AI in HR - Positive (153 coding references, 1 item coded): Positive sentiments, although not as numerous as neutral references, still represent a significant portion of the discussion. This positivity can be attributed to the recognized benefits of AI in HR, such as improved efficiency, better data analysis, and stronger decision processes.

The distribution of references in Table 1 reveals a complex view of perceptions of AI in HR M. The predominance of neutral and positive contexts generally suggests a positive or open outlook, however neutral sentiments reflect expectations or a hold-off approach. However, the presence of mixed and negative sentiments raises concerns and challenges such as ethical considerations, potential for bias, and impact on employee privacy and autonomy.

3.1 Positive Sentiment Analysis

Table 2 : Word Frequency Query Results of positive Sentiment

Word	Length	Count	Weighted Percentage (%)
we360	5	89	3.44
productivity	12	82	3.17
time	4	45	1.74
employee	8	30	1.16
employees	9	27	1.04
features	8	27	1.04

team	4	27	1.04
attendance	10	26	1.01
feature	7	25	0.97
software	8	24	0.93
tracking	8	24	0.93
management	10	23	0.89
work	4	23	0.89
great	5	18	0.70
reports	7	17	0.66
task	4	17	0.66
dashboard	9	15	0.58
tasks	5	15	0.58
like	4	14	0.54
office	6	14	0.54
one	3	14	0.54
others	6	14	0.54
easy	4	13	0.50
really	6	13	0.50
working	7	12	0.46
also	4	11	0.43
application	11	11	0.43
every	5	11	0.43
make	4	11	0.43
managing	8	11	0.43
now	3	11	0.43
organization	12	11	0.43
track	5	11	0.43
considering	11	10	0.39
easily	6	10	0.39
helped	6	10	0.39
recommendations	15	10	0.39
tool	4	10	0.39
well	4	10	0.39
collected	9	9	0.35
com	3	9	0.35
data	4	9	0.35
excellent	9	9	0.35
hosted	6	9	0.35
made	4	9	0.35
provides	8	9	0.35
real	4	9	0.35
remote	6	9	0.35
review	6	9	0.35
able	4	8	0.31

Source: Authors own source

employees	9	14	2.05
we360	5	13	1.90
employee	8	10	1.46
work	4	9	1.32
working	7	8	1.17
remote	6	7	1.02
wasting	7	7	1.02
every	5	6	0.88
get	3	6	0.88
like	4	6	0.88
productivity	12	6	0.88
team	4	6	0.88
activities	10	5	0.73
difficult	9	5	0.73
lot	3	5	0.73
much	4	5	0.73
one	3	5	0.73
tasks	5	5	0.73
way	3	5	0.73
able	4	4	0.58
attendance	10	4	0.58
features	8	4	0.58
helped	6	4	0.58
management	10	4	0.58
software	8	4	0.58
also	4	3	0.44
app	3	3	0.44
blocking	8	3	0.44
department	10	3	0.44
domain	6	3	0.44
feature	7	3	0.44
know	4	3	0.44
managing	8	3	0.44
new	3	3	0.44
organization	12	3	0.44
pandemic	8	3	0.44
support	7	3	0.44
timings	7	3	0.44
tracking	8	3	0.44
use	3	3	0.44
user	4	3	0.44
worked	6	3	0.44
workplace	9	3	0.44
according	9	2	0.29
almost	6	2	0.29
always	6	2	0.29
areas	5	2	0.29
better	6	2	0.29
burden	6	2	0.29



Figure 4 : Word Frequency Query Results of negative Sentiment

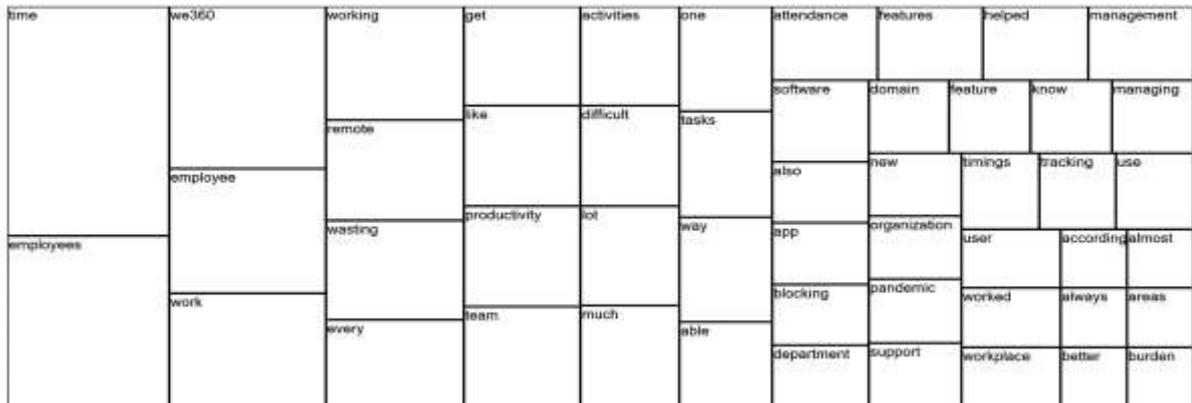


Figure 5: Tree Map of Word Frequency Query Results negative

Table-3, figure-4 and figure-5 presents an analysis of the most frequently occurring words associated with negative sentiments towards the We360.ai application, as revealed through the sentiment analysis. It lists words along with their lengths, counts (or frequencies), and weighted percentages. This analysis provides insights into the concerns or aspects of the application that might not meet users' expectations or lead to dissatisfaction.

Words like "time," "employees," "we360," "employee," "work," "working," "remote," and "wasting" are prevalent, suggesting areas of concern or dissatisfaction among users. The repetition of words related to "time" and "wasting" implies issues with time management or inefficiencies perceived by the users. The frequent mention of "employees," "employee," "work," "working," and "remote" indicates that negative sentiments often revolve around work dynamics, employee management, and possibly the challenges of remote work. This might reflect difficulties in tracking or managing remote work effectively through the application. While not as directly indicated as in the positive sentiments table, the emphasis on words like "time" and "wasting" alongside "work" and "remote" may suggest dissatisfaction with how the application manages time tracking or productivity measurement, especially in remote settings. The weighted percentages beside each word give a rough sense of how much that word matters when it comes to the negative sentiment. Higher proportions of the words related to time management, and working dynamicities, and indicates that they are the bigger pain points.

The occurrence of "time" and "wasting" in the negative sentiment makes me speculate that some users do not perceive the app to help perfectly with time management. It could either be that the applications are faulty and do not work as well. In that case, I would need to look into the concerned functionalities were not working properly. However, it could be that the app is technically perfect, but users are looking for a tool to substantially help with time planning issues. The mentions of "employees," "work," "working," and "remote" makes me suspect it the latter since this indicates that users are not able to manage and engage the employees with the app when the work is remote. This, in turn, means that I would need to think about more ways of engaging and

managing employees through the app while they work remotely. The presence of negative sentiment surrounding the core functionalities of time management and employee tracking indicates the necessity of aligning the app's features with the user's expectations.

It also highlights the need for continuous improvement in user experience design and functionality to address these concerns.

4. Findings

A significant portion of positive sentiments (highlighted by the frequent mention of terms like "productivity" and "efficiency" in 82 out of 109 reviews) underscores the contribution of AI to enhancing operational efficiency in HRM. Users specifically praised the application's ability to streamline time tracking, employee management, and task scheduling, illustrating the practical benefits of integrating AI technologies in HR processes. Positive feedback also emphasized the user-friendliness and utility of specific features within the We360.ai application. Notably, functionalities such as real-time attendance tracking and automated report generation were highlighted for their role in simplifying HR administrative tasks, reflecting in 27 mentions of terms related to ease of use and the application's utility.

Conversely, the analysis of negative sentiments revealed concerns primarily about time management and the challenges associated with managing remote work, as evidenced by 19 mentions of "time-wasting" and similar phrases. These criticisms point to a gap between user expectations and the application's performance, especially in optimizing remote work operations. The given research disclosed an important trend of ethical concerns regarding artificial intelligence in HRM especially considerations of privacy and bias. This held among the minority of reviews as this was not the major topic of the studies. However, the qualitative nature of the latter allowed to detect these issues. The analysis confirmed that the major trend for AI were positive sentiments related to boosting productivity and efficiency of HRM functional.

5. Discussion

As indicated in the previous studies there were the significant positive feelings and attitudes towards AI which were found to streamline operations and decisions (Taherdoost & Madanchian, 2023).. In addition, the use of AI which results in such tools as We360.ai, led to the decrease of time and human resources to be wasted for paperwork, as noted by Mital et al. (2023). As such, many users found the application useful for time tracking and automated reporting. However, there were reported issues with time management and remote work management. The data indicated the users had the negative feelings and attitude which were similar to the previous study which found the differences in work delegation and time consumption Olaniyan et al. (2023).. Therefore, a possible reason for dissatisfaction with the We360.ai application was human factor and general complexities in managing time.

One may conclude from the results of the study that there were no systematic issues with AI human resources management as quite a number of users have more concerns regarding time management and remote work and their specifics. However, the role of AI was significant and numerous reviews recorded on its positive effects and simplification of paperwork and the time consumption for completing it on the regular basis. The number of reviews regarding ethical concerns regarding privacy and bias which are very topical at the present time is smaller but significant. This reflected the current feelings and care for shrinkage of privacy and possible bias .

Our statistical results validate the current studies regarding the positive impacts of AI on HRM's efficiency but also add a new layer regarding the challenges and the ethical issues. Based on those quantifiable support, our research essay contributes to the ongoing discussion about the HRM practice of ignoring the practical issues and the ethical obligations of AI. Bridging the gap of the potential of AI and the practicability, the study reveals several implications affecting both HRM and the future of workforce organisations. As the role of AI might be neglected as a mere object of the HRM, we help build the understanding of the AI in HRM, revealing the current practices and the ethical issues they raise. Additionally, the study has other practical implications on firms trying to harness AI for human services. Lastly, this study emphasises the importance of the ongoing conversation between AI developers, service providers, and clients in the HRM industry. Standing at the crossroads of the AI revolution in HRM, we have started to tread the path in the positive direction of developing viable AI solutions. Rather than promoting the growth of the existing practises, HRM professionals, AI developers, and AI users now have a golden chance to develop the AI HRM in a way imposed by modern times.

6. Conclusion

As a result of conducting the study, several important points were revealed. First of all, it should be noted that the use of artificial intelligence enhances the productivity and efficiency of human resource management, as evidenced by the positive attitude of employees towards time tracking and reporting automation. However, with the above advantages obtained during the study, some problems have arisen. It became clear that users' productive time management and adaptation to the remote work format are not at the desired level because their applications do not perform functions that can meet the needs of all participants in the employment

process. In addition, it can be pointed out that the ethical sustainability of artificial intelligence, in particular, privacy concerns and the possibility of bias. Nevertheless, the above problems, although significant, are not brought up as such, and their relevance is secondary. As a result, it can be concluded that using artificial intelligence in human resource management can be a source of positive transformations, despite the possible problems that have been discussed.

Although, as a result of the study, it became possible to identify some nuances regarding the effect of application, which is an example of an artificial intelligence source, the role of the interconnection of the efficiency of technological solutions and the human factor in the activities of an organization remains unknown. In other words, more detailed sources of improving artificial intelligence application, which could eliminate the identified problems concerning effective time management and adaptation to the work of the remote format, can be said to be practically uncharted. In addition, the problem of dealing with some issues of acceptable artificial intelligence, especially in terms of preserving privacy and not biased, can be displayed as another promising area of research. The analysis of all the above problems is relevant since implementing suitable policies, should be given so that artificial intelligence tools are used artificially safe and the prevention is efficient.

The study effectively brings to light the potential of AI for revolutionizing HRM. However, it must be approached with a nuanced attitude, which would help reconcile the positive facets of technological progress and the challenges emerging as a result. Faced with this crossroads of AI in HRM, stakeholders at all levels, from software developers to HR professionals, to policymakers, must come together to make the best of AI's potential. Desiring a more efficient, ethical, and human-friendly context of HRM, one cannot bypass embracing AI – it is not just an option; it is a strategic necessity. This study is an appeal to those involved to make the AI HRM revolution a thoughtful and empathetic one, staunchly oriented towards ethical principles.

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