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Artificial Intelligence and Performance Management: Balancing Automation with the Human Element

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ABSTRACT

The main objective of the study was to investigate the combining effect of Artificial Intelligence and Human Element on Performance Management. Population of 85 consisting of Managers and Supervisors of various unit in Access Bank Plc Branches in Akwa Ibom State were studied to achieve this objective. Survey research technique was adopted where 70 managers and supervisors drawn from the population to form the sample size. A Descriptive survey method was adopted and primary instrument of data collection was self-developed questionnaire while the formulated hypotheses were tested using simple regression statistical tool through the help of SPSS version 27. The study revealed that; AI data analysis tools and managers' judgment have synergistic effect on performance management and that AI performance prediction algorithms and coaching techniques have synergistic effect on performance management. It was recommended that AI-powered continuous feedback should be combined with managers coaching to create a more engaging performance management system by identifying strengths, weaknesses, and fostering a growth mindset and Human managers, with their real-world experience, should combine AI's data analysis with considerations like workload and employee well-being. This combined approach leads to a fairer and more effective way to improve employee performance.

INTRODUCTION

Artificial Intelligence (AI) has transformed from a futuristic concept to a tangible reality that is revolutionizing our daily experiences, including the way we work. AI's ability to process vast amounts of data at lightning speed makes it a powerful tool, and performance management is a prime area ripe for transformation.

Traditionally, performance management has relied on subjective evaluations, often conducted annually. This one-size-fits-all approach can leave employees feeling disengaged and lacking clear direction for improvement (Armstrong, 2013).

AI can analyze vast troves of data, including performance metrics, project feedback, and even communication patterns, to provide a more holistic view of employee strengths and weaknesses. However, AI isn't designed to replace human interaction entirely. The human element remains crucial in performance management.

Imagine an AI system that flags an employee's declining productivity. While AI can't delve into the reasons behind the dip, a human manager can initiate a conversation to understand the underlying issues, be it workload, personal challenges, or a need for skill development. The true power lies in integrating AI and the human touch. AI can automate repetitive tasks like data analysis and report generation, freeing up managers' time for meaningful conversations and personalized coaching. AI-generated insights can inform these conversations, allowing managers to tailor feedback and development plans to address each employee's specific needs and goals.

Ultimately, the goal is to create a performance management system that's both efficient and effective. AI provides the data and insights, while human judgment and empathy ensure a fair, supportive, and ultimately motivating experience for employees. This synergy between AI and the human touch holds the key to unlocking employee potential and driving organizational success.

Statement of Problem

The integration of Artificial Intelligence (AI) in performance management has the potential to revolutionize the way organizations evaluate and improve employee performance. However, there are several challenges and limitations that need to be addressed.

One of the major challenges is bias in AI-driven decision making. AI algorithms can perpetuate existing biases and discrimination if they are programmed on biased data, leading to unfair performance evaluations and potential legal issues. Moreover, the lack of transparency and explainability in AI-driven performance management systems can make it challenging for employees to understand the basis for their performance evaluations and improvement recommendations.

Another significant limitation is the dependence on data quality. AI algorithms require high-quality data to make accurate predictions and recommendations, but performance data is often incomplete, inaccurate, or unreliable. Especially concerning the practice at Access Bank Plc, where bank staff allegedly assist customers in providing favorable feedback through the bank's artificial intelligence app. More often than not, customers are automatically contacted via email within a few hours of their bank transaction to provide feedback on their experience with staff. Where the customer react negatively, the information is sent directly to Access Bank's corporate headquarters, which is geographically distant from the branch. This can

result in drastic disciplinary measures being taken against staff without investigating other contributing factors, such as work conditions and the staff's health.

It is based on this observation that these work is conducted to addressing the synergistic effect of artificial intelligence and Human element on performance management

Objectives of the study

The main objective of the study was to examine the synergistic effect of artificial intelligence and human element on performance management. However, specific objectives were:

1. To examine the combining effect of AI data analysis tools and managers judgment on performance management
2. To examine the combining effect of performance prediction algorithms and coaching techniques on performance management

Research Questions

1. What is the combining effect of AI data analysis tools and managers judgment on performance management
2. What is the combining effect of performance prediction algorithms and coaching techniques on performance management

Statement of Hypotheses

The following hypotheses were formulated in line with research objectives:

$H_{O1:}$ AI data analysis tools and managers' judgment will have no combining effect on performance management

$H_{O2:}$ Performance prediction algorithms and coaching techniques will have no combining effect on performance management

Conceptual Review

Artificial Intelligence

Artificial intelligence (AI) can be defined as a branch of computer science concerned with creating intelligent machines capable of mimicking human cognitive functions. Artificial intelligence (AI) is a rapidly growing field in computer science focused on creating intelligent machines capable of replicating some aspects of human cognitive abilities (McCarthy et al., 2007). This vast field employs various approaches to achieve this goal, but at its core, AI revolves around several key ideas:

- **Problem-solving:** AI systems are designed to tackle complex problems by analyzing data, identifying patterns, and making decisions based on their learnings. This can involve tasks like medical diagnosis, financial forecasting, or even playing games at a superhuman level (Russell & Norvig, 2021).
- **Learning:** A core aspect of AI is its ability to learn and improve over time. This can be achieved through different techniques like machine learning (ML), where algorithms learn from vast amounts of data without explicit programming (Dhar, 2013). Another technique is deep learning, which uses artificial neural networks

inspired by the human brain, particularly effective for tasks like image or speech recognition (LeCun et al., 2015).

- **Reasoning:** AI systems can process information, draw logical conclusions, and make informed decisions. This may involve applying rules, weighing evidence, or adapting to new situations. While not yet at the human level of general reasoning, AI can excel in specific domains (Bostrom, 2014).
- **Automation:** AI allows for automating tasks traditionally done by humans. This can range from routine tasks like scheduling emails to complex processes in manufacturing or scientific research (Frey & Osborne, 2017).

AI encompasses a spectrum of technologies, with some key subfields being:

- **Machine Learning (ML):** Algorithms learn from data without explicit programming, allowing them to improve performance over time.
- **Deep Learning:** A subfield of ML that uses artificial neural networks to process information and make decisions.
- **Natural Language Processing (NLP):** Enables computers to understand and process human language, allowing for applications like chatbots or machine translation.

Performance Management

Performance management is a crucial aspect of any successful organization. It can be defined as an ongoing process of communication, collaboration, and assessment that takes place between employees and their managers. This process goes beyond simply evaluating an employee's performance at the end of a year. Instead, it's a collaborative effort that focuses on continuous improvement and development for both the individual and the organization as a whole (Armstrong & Baron, 2018).

There are several key objectives of performance management. One important goal is to set clear expectations and goals. This involves establishing objectives that are mutually agreed upon by both the employee and the manager. These objectives should be aligned with both individual career aspirations and the overall goals of the organization (Milkovich & Newman, 2018).

Another key aspect of performance management is ongoing feedback. Regular feedback from managers is essential for employee development. This feedback should highlight an employee's strengths, identify any areas for improvement, and offer guidance on how the employee can develop their skills and knowledge (Murphy, 2018).

Performance management can also be a powerful tool for motivating and engaging employees. Effective performance management systems acknowledge and celebrate employee achievements. This recognition fosters a sense of growth, development, and value within the organization, leading to a more motivated and engaged workforce (Noe et al., 2019).

Finally, performance management can be used to identify areas where improvement is needed. Through the ongoing communication and assessment process, performance management can help pinpoint any training needs, skill gaps, or systemic issues that might be hindering performance (Bratton & Gold, 2017). By addressing these issues, organizations can

create a more supportive environment that fosters continuous learning and growth for both employees and the organization itself.

In essence, performance management is a collaborative process that benefits both the individual employee and the organization as a whole. It fosters growth, development, and a sense of value within the workplace.

Performance management is a crucial process, but it can also be time-consuming and cumbersome. Thankfully, various tools can help streamline the process, improve efficiency, and enhance communication between employees and managers. Here's a look at some key performance management tools:

- **Goal-Setting Software:** These tools facilitate collaborative goal setting between employees and managers. They allow for setting SMART goals (Specific, Measurable, Achievable, Relevant, and Time-bound), tracking progress, and ensuring alignment with organizational objectives (Jin et al., 2018).
- **Performance Appraisal Software:** This software automates the performance appraisal process, making it easier to conduct regular reviews, document feedback, and track employee development over time (Singh, 2018).
- **360-Degree Feedback Tools:** These tools allow for collecting feedback from various sources, including peers, supervisors, and even clients, providing a more comprehensive view of an employee's performance (Burke et al., 2010).
- **Performance Analytics Dashboards:** These dashboards provide real-time insights into individual and team performance metrics. This data can be used to identify strengths and weaknesses, track progress towards goals, and make data-driven decisions about development opportunities (Guzzo & Jex, 2015).
- **Performance Management Apps:** These mobile apps offer convenient access to performance management tools on the go. This allows for providing and receiving feedback, tracking progress, and managing goals in real-time (Singh, 2018).

Theoretical framework

Knowledge Representation and Reasoning (KR&R) by John McCarthy (1950s)

In the 1950s, John McCarthy, a founding figure in Artificial Intelligence (AI), laid the foundation for Knowledge Representation and Reasoning (KR&R). McCarthy believed that achieving human-level intelligence in machines required symbolic representation and logical reasoning. His vision involved AI systems using symbols to represent real-world knowledge and then manipulating those symbols using the rules of logic. This approach would allow AI systems to solve problems, make decisions, and learn.

McCarthy's core assumptions were that knowledge could be effectively captured with symbols and that logic served as a universal language for reasoning. By applying logic to these symbols, AI systems could reason and draw conclusions. This emphasis on symbols and logic laid the groundwork for symbolic AI, a dominant approach in early AI research. KR&R continues to be crucial for building intelligent systems, but it faces challenges like knowledge base complexity and limitations in common-sense reasoning. As AI research progresses, KR&R coexists with other approaches like machine learning, creating a more comprehensive toolkit for building intelligent machines.

Sociotechnical Systems Theory by Eric Trist and Ken Bamforth (1951) & Fred Emery (1950s)

This theory was developed by several authors but the foundation was laid by Eric Trist and Ken Bamforth (1951) & Fred Emery (1950s). Imagine a performance management system that seamlessly blends the strengths of human expertise with the power of artificial intelligence. Sociotechnical Systems Theory (STST) provides the framework for this ideal. STST emphasizes that social systems (people) and technical systems (technology) don't function in isolation. They're interdependent, and for optimal performance, they need to be designed to work together.

In the context of performance management, STST highlights the benefits of leveraging AI for tasks it excels at, like data analysis and report generation. This frees up valuable time for human managers to focus on the social aspects, such as providing nuanced feedback, coaching, and understanding employee motivations beyond the data. STST promotes collaboration, where AI offers data-driven insights while final decisions involve interaction between humans and AI.

This research work is built upon this theory as this approach offers numerous benefits. Combining human judgment with AI's analytical power leads to more informed and objective performance management decisions. Employees benefit from receiving both data-driven feedback and personalized coaching, leading to increased engagement and motivation. Additionally, AI automates repetitive tasks, allowing managers to focus on higher-level activities. However, implementing STST effectively requires careful design of human-AI interaction and ensuring employee trust in the system's transparency and fairness. Ultimately, STST can create a performance management system that's efficient, fair, and engaging for both employees and the organization.

Empirical Review

Morris and Welch (2022) conducted a research to Examining the Synergy Between Artificial Intelligence and Human Resource Management Practices, this research explored how AI can improve HR practices like Sales Growth and Customers satisfaction. Their objective was to identify areas where AI and human expertise can work together effectively. Using a thematic analysis approach, they reviewed existing research on AI in HR. The review found that AI can provide valuable data-driven insights for sales performance Judgment, but human judgment is still crucial for interpreting data and providing personalized feedback. Additionally, AI can automate tasks, freeing up managers for more strategic activities. Overall, the findings suggest a synergistic effect between AI and human elements in Human Resources, with AI enhancing efficiency and data analysis, while human expertise ensures fairness, personalized support, and employee engagement.

Kumar et al. (2020) conducted a research on AI's potential on key performance indicators in performance management. The study's objective was to investigate AI's impact on KPIs and overall performance management. The research design consisted of a global survey of 3,000 managers and interviews with 17 executives. Descriptive statistics revealed AI's ability to improve KPIs, leading to better outcomes. Organizations using AI for KPIs were three times more likely to see financial benefits, and three types of smart KPIs were identified: descriptive, predictive, and prescriptive. While 60% of managers recognized the need to improve KPIs, only one-third used AI to create new ones, highlighting a significant opportunity for organizations to leverage AI.

Methodology

This study employed a descriptive survey design to gather information, opinions, and views from managers and supervisors across various departments in Access Bank Plc branches located in Uyo, Ikot Ekpene, Oron, Eket and Abak LGA with a population of 85 staff. Taro Yamane formular was used to select 70 respondents as the sample size which were conveniently selected. A Likert-scaled questionnaire titled "AI-Human Element and Performance Management" was developed to capture data on the three key variables of interest: artificial intelligence, human element and performance management. This electronic questionnaire was distributed through the company's approved channels. The researcher then employed regression analysis to test the study's hypotheses.

Data Presentation

Table 1.1: Responses to Research Question One (Part A)

	AI data analysis tools and performance management	**SA**	**A**	**U**	**D**	**SD**	**Total**
1	AI-powered goal setting software can be a very effective tool for staff performance management.	50 78.62	15 18.87	0 0.00	3 1.89	2 0.63	70 100
2	AI-powered appraisal software can be very effective tool for staff performance management	48 73.85	20 24.62	1 0.92	1 0.62	0 0.00	70 100
3	AI data analysis tools offer promising possibilities for enhancing staff performance	41 66.34	24 31.07	0 0.00	3 1.94	2 0.65	70 100
	Aggregate	139 0.66	59 0.28	1 0.00	7 0.03	4 0.02	210 100
	Proportional Ratio	**46.33**	**19.67**	**0.33**	**2.33**	**1.33**	70

Source: Field Survey 2024

The table above presents data to reveal the effect of using AI data analysis tools on performance management. It shows that majority of the respondents 78.62%, 73.85%, and 66.34% strongly agreed that AI-powered goal setting software can be a very effective tool for staff performance management, AI-powered appraisal software can be very effective tool for staff performance management and AI data analysis tools offer promising possibilities for enhancing staff performance. With aggregate of 66%, this indicates that AI data analysis tools affects performance management.

Table 1.2: Responses to Research Question One (Part B)

	Managers' Judgment and	**SA**	**A**	**U**	**D**	**SD**	**Total**

	performance management						
1	manager's judgment on work conditions can be a valuable tool for improving performance	41 65.50	25 31.95	1 0.96	2 1.28	1 0.32	70 100
2	manager's judgment on employees actual performance can be a valuable tool for improving performance	43 68.04	24 30.38	0 0.00	2 1.27	1 0.32	70 100
3	Human judgment plays a crucial role in promoting positive staff performance	40 64.31	26 33.44	1 0.96	1 0.64	2 0.64	70 100
	Aggregate	124 0.59	75 0.36	2 0.01	5 0.02	4 0.02	210 100
	Proportional Ratio	**41.33**	**25.00**	**0.67**	**1.67**	**1.33**	70

Source: Field Survey 2024

The table above presents data to reveal the effect of using manager's judgment on performance management. It shows that majority of the respondents 65.50%, 68.04%, and 64.31% strongly agreed that manager's judgment on work conditions can be a valuable tool for improving performance, manager's judgment on employee's actual performance can be a valuable tool for improving performance and Human judgment plays a crucial role in promoting positive staff performance. With aggregate of 59%, this indicates that Managers' Judgment affects performance management

Table 1.3: Responses to Research Question One (Part A & B combined)

Q1.	**What is the effect of AI data analysis tools and managers judgment on performance management**	**SA**	**A**	**U**	**D**	**SD**	**Total**
1	AI data analysis tools offer promising possibilities for enhancing staff performance	43 75.44	12 16.84	1 1.05	5 3.51	9 3.16	70 100
2	Human judgment plays a crucial role in promoting positive staff performance, particularly when combined with well-designed performance appraisals	45 75.76	14 18.86	0 0.00	5 3.34	6 2.02	70 100
3	Combining AI and human judgment has the potential to significantly improve staff performance	55 84.40	10 12.42	0 0.00	2 1.24	3 0.93	70 100
	Aggregate	143 0.68	36 0.17	1 0.00	12 0.06	18 0.09	210 100
	Proportional Ratio	**47.67**	**12.00**	**0.33**	**4.00**	**6.00**	70

Source: Field Survey 2024

As shown in the table above majority of the respondents 75.44%, 75.76%, and 84.40% strongly agreed that AI data analysis tools offer promising possibilities for enhancing staff performance, human judgment plays a crucial role in promoting positive staff performance, particularly when combined with well-designed performance appraisals and combining AI and human judgment has the potential to significantly improve staff performance. With aggregate of 68%, this indicates that combining AI and human judgment will give a better performance than using separately. Organization can achieve greater performance when relying on AI for data analysis while managers will the judgment which will give room for paying attention to other factor which may influence staff attitude to work.

Table 1.4: Responses to Research Question Two (Part A)

	AI performance prediction algorithms and performance management	**SA**	**A**	**U**	**D**	**SD**	**Total**
1	AI can analyze large amounts of data quickly and suggest accurate directions	55 83.33	13 15.76	0 0.00	1 0.61	1 1.30	70 100
2	I can discover performance patterns and recommend suitable training	53 82.30	11 13.66	2 1.86	3 1.86	1 0.31	70 100
3	Computer-based performance predictions can inform and potentially improve actual staff performance	47 78.16	8 9.79	1 0.92	3 1.83	1 0.31	70 100
	Aggregate	165 0.79	32 0.15	3 0.01	7 0.03	3 0.01	210 100
	Proportional Ratio	**55.00**	**10.67**	**1.00**	**2.33**	**1.00**	70

Source: Field Survey 2024

The table above presents data to reveal the effect of using AI performance suggestions on performance management. It shows that majority of the respondents 88.33%, 82.30%, and 78.16% strongly agreed that AI can analyze large amounts of data quickly and suggest accurate directions, I can discover performance patterns and recommend suitable training and Computer-based performance predictions can inform and potentially improve actual staff performance. With aggregate of 79%, this indicates that AI performance prediction algorithms affect performance management

Table 1.5: Responses to Research Question Two (Part B)

	Managers coaching techniques and performance management	**SA**	**A**	**U**	**D**	**SD**	**Total**
1	Managers' coaching style can be a valuable tool for monitoring employee performance on real time	47 74.13	19 23.97	0 0.00	2 1.26	2 0.63	70 100
2	Regular one-on-one meetings can foster open communication and help managers understand employee strengths and challenges.	43 66.98	26 32.40	0 0.00	1 0.62	0 0.00	70 100

3	Effective managers coaching techniques can improve actual staff performance	49 77.78	15 19.05	2 1.90	0 0.00	4 1.27	70 100
	Aggregate	139 0.66	60 0.29	2 0.01	3 0.01	6 0.03	210 100
	Proportional Ratio	**46.33**	**20.00**	**0.67**	**1.00**	**2.00**	70

Source: Field Survey 2024

The table above presents data to reveal the effect of using managers coaching techniques on performance management. It shows that majority of the respondents 74.13%, 66.98%, and 77.78% strongly agreed that Managers' coaching style can be a valuable tool for monitoring employee performance on real time, Regular one-on-one meetings can foster open communication and help managers understand employee strengths and challenges and Effective managers coaching techniques can improve actual staff performance. With aggregate of 66%, this indicates that Managers coaching techniques affect performance management

Table 1.6: Responses to Research Question Two (Part A & B)

Q2.	**What is the effect of performance prediction algorithms and coaching techniques on performance management**	**SA**	**A**	**U**	**D**	**SD**	**Total**
1	Computer-based performance predictions can inform and potentially improve actual staff performance	50 79.87	13 16.61	1 0.96	2 1.28	4 1.28	70 100
2	Effective managers coaching techniques can improve actual staff performance	48 77.92	13 16.88	2 1.95	3 1.95	4 1.30	70 100
3	The combination of AI performance prediction and manager coaching techniques may lead to significant improvements in staff performance	61 91.59	5 6.01	0 0.00	4 2.40	0 0.00	70 100
	Aggregate	159 0.76	31 0.15	3 0.01	9 0.04	8 0.04	210 100
	Proportional Ratio	**53**	**10.33**	**1.00**	**3.00**	**2.67**	70

Source: Field Survey 2024

As shown in the Table 4.1 majority of the respondents 79.87%, 77.92%, and 91.59% strongly agreed that Computer-based performance predictions can inform and potentially improve actual staff performance also effective managers coaching techniques can improve actual staff performance but the combinati**on of** AI performance prediction and manager coaching

techniques may lead **to** significant improvements in staff performance. With aggregate of 76%, this indicates that using both AI and human will give a high performance at work. This is so because, AI cannot talk to individual on a real time which still remains managers function in workplace to give coach less skilled staff for effective and efficient performance

Data Analysis

Hypothesis One

$H_{O1:}$ AI data analysis tools and managers' judgment will have no synergistic effect on performance management

Descriptive Statistics

	Mean	Std. Deviation	N
Performance	3.53	1.316	70
AI_Hunam_Judgement	1.80	.754	70

Correlations

		Performance	AI_Hunam_Judgement
Pearson Correlation	Performance	1.000	.020
	AI_Hunam_Judgement	.020	1.000
Sig. (1-tailed)	Performance	.	.633
	AI_Hunam_Judgement	.633	.
N	Performance	70	70
	AI_Hunam_Judgement	70	70

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.920[a]	.850	.014	1.325	.000	.028	1	68	.004

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.920[a]	.850	.014	1.325	.000	.028	1	68	.004

a. Predictors: (Constant), AI_Hunam_Judgement

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.050	1	.050	.045	.004[a]
	Residual	119.393	68	1.756		
	Total	119.443	69			

a. Predictors: (Constant), AI_Hunam_Judgement

b. Dependent Variable: Performance

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.464	.413		8.397	.000
	AI_Hunam_Judgement	.636	.212	.020	.169	.004

a. Dependent Variable: Performance

The R^2 which is the coefficient of determination was high with a value of .850 which indicate that 85% of the changes in the dependent variable can be explained by the changes in the independent variable while 15% can be explained by the stochastic terms in model. This implies that this variable (Performance) can explain 85% percent of Change in AI-Human Judgment, leaving 15% percent unexplained. Looking at the ANOVA table; the significant

value (p-value) = less than 0.05 (alpha), hence we conclude that the model is significant (F1, = 0.45, p = 0.004). furthermore, y = 3.464 + .836 is the equation line in using the AI-Human Judgment variable in predicting the effect on performance (otherwise called the slope) is significant at p < 0.000. With this, the researcher reject the null hypothesis and state that AI data analysis tools and managers' judgment has synergistic effect on performance management

Hypothesis Two

$H_{O2:}$ Performance prediction algorithms and coaching techniques will have no synergistic effect on performance management

Descriptive Statistics

	Mean	Std. Deviation	N
Performance	1.21	.535	70
AI_Hunam_Coaching	2.43	1.246	70

Correlations

		Performance	AI_Hunam_Coaching
Pearson Correlation	Performance	1.000	.186
	AI_Hunam_Coaching	.186	1.000
Sig. (1-tailed)	Performance	.	.761
	AI_Hunam_Coaching	.761	.
N	Performance	70	70
	AI_Hunam_Coaching	70	70

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change

1	.786[a]	.735	.620	.530	.035	2.441	1	68	.003

a. Predictors: (Constant), AI_Hunam_Coaching

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.686	1	.686	2.441	.003[a]
	Residual	19.100	68	.281		
	Total	19.786	69			

a. Predictors: (Constant), AI_Hunam_Coaching

b. Dependent Variable: Performance

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.020	.140		7.309	.000
	AI_Hunam_Coaching	.680	.051	.186	1.562	.003

a. Dependent Variable: Performance

The R^2 which is the coefficient of determination was high with a value of .735 which indicate that 73.5% of the changes in the dependent variable can be explained by the changes in the independent variable while 26.5% can be explained by the stochastic terms in model. This implies that this variable (Performance) can explain 73.5% percent of Change in AI-Human Coaching, leaving 26.5% percent unexplained. Looking at the ANOVA table; the significant value (p-value) = less than 0.05 (alpha), hence we conclude that the model is significant (F1, = 2.44, p = 0.003). furthermore, y = 1.020 + .680 is the equation line in using the AI-Human Coaching variable in predicting the effect on performance (otherwise called the slope) is significant at p < 0.003. With this, the researcher rejects the null hypothesis and state that AI data analysis tools and managers' judgment has synergistic effect on performance management

Discussion of Findings

Test of Hypothesis one revealed that AI data analysis tools and managers' judgment has synergistic effect on performance management. The realm of performance management, AI data analysis tools and managers' judgment have the potential to work together in a way that creates a powerful and beneficial effect. This synergy arises from the way AI tools function. These tools rely heavily on the quality of data they are trained on. If the data fed into the system is inaccurate or incomplete, the results and insights generated by the AI will be misleading and ultimately unhelpful.

However, AI tools offer a distinct advantage. They can analyze vast amounts of data and identify patterns that human managers might miss entirely. This allows managers to make more informed decisions while still retaining the crucial element of human judgment. Here's where the synergy comes into play. Managers can leverage the insights gleaned from AI analysis to consider factors beyond the data itself. These factors can include the condition of the workplace, the workload placed on employees, and even employee health.

By taking a holistic approach, one that combines the analytical power of AI with the experience and judgment of human managers, we can achieve a more comprehensive understanding of employee performance. This, in turn, leads to better performance management outcomes. AI provides valuable insights from the data, while managers can use their expertise to consider the human element and create a well-rounded strategy for improving performance.

The second hypothesis revealed that Performance prediction algorithms and coaching techniques has synergistic effect on performance management. Traditional performance management often relies on hindsight, evaluating past performance after the fact. However, the second hypothesis explored in this research proposes a more proactive approach. It suggests that combining performance prediction algorithms with coaching techniques can create a powerful synergy for improved performance management.

AI algorithms as highly skilled data analysts. They can sift through vast amounts of employee data, identifying patterns and trends that might predict future performance issues. This allows managers to proactively identify individuals who might benefit from additional support. However, raw data doesn't provide actionable insights. This is where human expertise comes in. Skilled coaches can take the predictions from the AI algorithms and tailor coaching strategies to address the specific needs of each employee. This real-time, personalized approach allows for immediate interventions that can address potential challenges before they become significant problems. By combining the predictive power of AI with the human touch of coaching, organizations can create a more proactive and effective performance management system, ultimately leading to improved employee performance and overall efficiency.

Conclusion

This study was conducted to investigate the synergistic effect of artificial intelligence and human element on performance management. Traditionally, performance management relied solely on human judgment. This study explored a new approach: combining AI's analytical muscle with human expertise. The results are clear - the synergy between these two elements leads to significant improvements.

AI shines in analyzing vast amounts of data, uncovering hidden patterns and trends that inform performance decisions. This provides invaluable insights that can be leveraged to identify areas for improvement and celebrate successes. However, AI lacks the human touch. It can't account for individual circumstances, employee well-being, or the nuances of human interaction.

This is where human managers step in. They play a critical role in interpreting the data provided by AI. They consider factors like workload, personal situations, and individual strengths. This human judgment ensures fair and effective performance assessments. Furthermore, managers can leverage AI's performance predictions to proactively provide coaching and support, fostering a growth mindset and keeping employees engaged. By combining AI's strengths with human expertise, organizations can create a performance management system that fuels employee development and drives overall organizational success.

Recommendation

- Human managers, with their real-world experience, should combine AI's data analysis with considerations like workload and employee well-being. This well-rounded approach leads to a fairer and more effective way to improve employee performance.
- AI-powered continuous feedback should be combined with managers coaching to create a more engaging performance management system by identifying strengths, weaknesses, and fostering a growth mindset.

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