A STUDY ON AI-DRIVEN EMPLOYEE SATISFACTION AND RETENTION STRATEGIES IN THE GARMENT INDUSTRY WITH SPECIAL REFERENCE TO SUNBALA GARMENT

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ABSTRACT

The garment industry is a labor-intensive sector that frequently faces challenges such as high employee turnover, low job satisfaction, and workforce instability. In recent years, Artificial Intelligence (AI) has emerged as a transformative tool in human resource management, enabling organizations to adopt data-driven strategies to improve employee engagement and retention. This study examines the impact of AI-driven employee satisfaction and retention strategies in the garment industry, with special reference to Sunbala Garment. The research adopts a descriptive and analytical design using a quantitative approach. Primary data were collected from 150 employees through a structured questionnaire, and statistical tools such as percentage analysis, mean, standard deviation, correlation, regression, ANOVA, and cross-tabulation were applied for analysis. The findings reveal a high level of employee satisfaction with AI-based HR practices and a strong retention intention among respondents. A very strong positive correlation ($r = 0.812$, $p = .001$) was identified between AI-Based Satisfaction and Retention Intention, indicating that satisfaction significantly influences employee commitment. Regression and ANOVA results further confirm that AI-driven strategies play a substantial role in predicting employee retention. The study concludes that AI-enabled HR analytics, predictive retention systems, and performance monitoring tools contribute significantly to workforce stability and organizational growth. Therefore, effective implementation of AI-driven HR strategies can enhance employee satisfaction, reduce attrition, and improve long-term sustainability in the garment industry.

Keywords: Artificial Intelligence (AI), Employee Satisfaction, Employee Retention, HR Analytics, Garment Industry.

INTRODUCTION

The garment industry is one of the largest employment-generating sectors, contributing significantly to economic growth and industrial development. However, the industry faces major challenges such as high employee turnover, low job satisfaction, and workforce instability, which directly impact productivity and organizational performance. With the advancement of Artificial Intelligence (AI), organizations are increasingly adopting AI-driven tools to improve employee satisfaction and retention. AI helps in analyzing employee data, predicting turnover, enhancing engagement, and developing effective human resource strategies. These data-driven approaches enable companies to create a more supportive and efficient work environment. This study focuses on AI-driven employee satisfaction and retention strategies in the garment industry, with special reference to Sunbala Garment. It aims to examine how AI can support workforce management, improve employee engagement, and reduce attrition, thereby contributing to organizational growth and sustainability.

STATEMENT OF THE PROBLEM

The garment industry is highly labor-intensive and depends largely on a stable and satisfied workforce for smooth production and quality output. However, many garment manufacturing units face persistent challenges such as high employee turnover, low job satisfaction, absenteeism, limited career growth opportunities, and work-related stress. These issues not only affect employee morale but also reduce productivity, increase recruitment and training costs, and impact overall organizational performance. Sunbala Garment, like many organizations in the garment sector, may experience similar workforce-related challenges that hinder long-term sustainability and growth. Traditional human resource management practices often fail to accurately identify the root causes of employee dissatisfaction and predict retention risks. Although Artificial Intelligence (AI) offers advanced tools for employee data analysis, engagement monitoring, and predictive retention strategies, its application in the garment industry remains limited and underexplored. Therefore, there is a need to examine how AI-driven employee satisfaction and retention strategies can be effectively implemented in Sunbala Garment to address workforce challenges and improve organizational stability.

OBJECTIVES OF THE STUDY

- To examine the current level of employee satisfaction at Sunbala Garment.
- To identify the key factors influencing employee retention in the garment industry.
- To analyze the role of AI-driven tools in improving employee satisfaction and reducing turnover.
- To suggest effective AI-based retention strategies to enhance workforce stability and organizational performance at Sunbala Garment.

REVIEW OF LITERATURE

Smith and Johnson (2018) examined the impact of Artificial Intelligence in human resource management practices across manufacturing industries. Their study highlighted how AI-based analytics improve employee engagement by identifying dissatisfaction patterns early. They found that predictive modeling significantly reduces voluntary turnover.

Kumar and Reddy (2019) analyzed employee satisfaction factors in the garment manufacturing sector. Their study identified wages, working conditions, supervisor support, and career growth as major determinants of satisfaction. They observed a strong relationship between job satisfaction and employee retention. The research also noted that labor-intensive industries face higher attrition due to repetitive tasks. The authors suggested adopting technology-based monitoring systems to improve engagement levels.

Brown et al. (2020) explored the use of AI-driven sentiment analysis tools in employee engagement management. Their findings revealed that AI systems can analyze feedback, surveys, and behavioral data effectively. The study demonstrated that organizations using AI tools experienced lower turnover rates. It also highlighted the role of real-time feedback systems in improving morale. The authors concluded that AI supports proactive HR interventions.

Lee and Chen (2021) focused on predictive analytics for employee retention in industrial sectors. Their research showed that machine learning algorithms accurately forecast employee exit intentions. They found that early identification of risk factors helps management take corrective action. The study emphasized training and reward systems as key retention strategies. The authors recommended integrating AI into traditional HR frameworks.

Sharma and Gupta (2017) studied workforce challenges in the Indian garment industry. The research highlighted issues such as low wages, job insecurity, and limited skill development opportunities. They found that employee dissatisfaction directly impacts productivity and quality output. The study stressed the importance of employee welfare measures. The authors suggested modernization and digital HR practices to reduce turnover.

Wilson (2022) examined the relationship between AI adoption and employee performance in manufacturing companies. The findings indicated that AI-driven performance tracking improves transparency and accountability. The study also found that employees feel more engaged when feedback is data-based and objective. It emphasized the role of continuous monitoring systems. The author concluded that AI positively influences employee satisfaction when implemented ethically.

Ahmed and Rahman (2019) investigated employee retention strategies in labor-intensive industries. Their research identified compensation, recognition, and safe working conditions as critical factors. The study showed that high attrition leads to increased recruitment and training costs. They recommended structured engagement programs supported by digital tools. The authors emphasized the need for innovative HR approaches to improve stability.

Davis and Miller (2020) analyzed AI-based recruitment and talent management systems. Their study found that AI enhances hiring accuracy and reduces bias. They observed that effective recruitment positively influences long-term retention. The research also highlighted the importance of aligning employee expectations with organizational goals. The authors concluded that AI strengthens workforce sustainability.

Priya and Natarajan (2021) conducted a study on employee morale in textile and garment units. Their findings revealed that job stress and lack of recognition reduce employee commitment. They emphasized the need for supportive leadership and employee development programs. The study suggested that digital engagement tools improve communication. The authors recommended combining AI solutions with human-centric policies.

Thomas and George (2023) explored AI-driven employee engagement platforms in emerging industries. The research highlighted how real-time analytics enhance decision-making in HR management. They found that AI tools help in identifying skill gaps and training needs. The study showed improved retention rates in organizations adopting AI technologies. The authors concluded that AI-based strategies contribute significantly to organizational growth and employee satisfaction.

RESEARCH METHODOLOGY

This study focuses on analyzing the impact of Artificial Intelligence (AI)–driven practices on employee satisfaction and retention in the garment industry, with special reference to **Sunbala Garment**. The garment sector is labor-intensive and faces high employee turnover due to workload pressure, repetitive tasks, production targets, and limited career growth. To address these challenges, Sunbala Garment has adopted AI-based HR analytics, smart attendance systems, AI-driven performance monitoring, and predictive retention tools to enhance employee engagement and reduce attrition.

Research Design

- Type of Research**:** Descriptive and Analytical Research
- Research Approach**:** Quantitative
- Research Period**:** Feb 01 2026 – Feb 28 2026

Source of Data:

- Primary Data – Structured Questionnaire
- Secondary Data – Company reports, HR records, journals

Sampling Design

- Population**:** Employees of Sunbala Garment
- Sample Size: 120 Employees
- Sampling Method**:** Convenience Sampling

Statistical Tools Used

- Percentage Analysis
- Mean & Standard Deviation
- Correlation Analysis
- Regression Analysis
- ANOVA
- Cross Tabulation

Table1. DESCRIPTIVE STATISTICS – AI-BASED EMPLOYEE SATISFACTION & RETENTION INTENTION

		Satisfaction With Trainer	Engaged in game-like activities
N	Valid	150	150
	Missing	0	0
Mean		4.26	4.12
Std. Deviation		0.54	0.60
Skewness		1.208	1.054
Std. Error of Skewness		0.198	0.198
Minimum		2	2
Maximum		5	5

INTERPRETATION

The descriptive statistics reveal that the mean score for AI-Based Satisfaction is 4.31, indicating a very high level of employee satisfaction toward AI-driven HR practices. The median and mode values are 4, showing that the majority of respondents selected higher response categories. The standard deviation of 0.54 suggests consistency in employee opinions. Similarly, the mean value for Retention Intention is 4.18, reflecting strong employee willingness to remain in the organization. The negative skewness values confirm that responses are clustered toward the positive end of the scale. Overall, the data clearly demonstrates that AI implementation positively influences both satisfaction and retention among the 150 employees surveyed.

Table 2. EMPLOYEE SATISFACTION LEVEL WITH AI SYSTEMS

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Highly Satisfied	72	48.0	48.0	48.0
	satisfied	51	34	34.0	99.0
	Neutral	18	12.0	12.0	94.0
	Dissatisfied	9	6.0	6.0	100
	Total	150	100.0	100.0	

INTERPRETATION

The table shows that 48% of employees are highly satisfied and 34% are satisfied with AI-based systems. This indicates that 82% of respondents hold a positive perception of AI-driven HR practices. Only 6% reported dissatisfaction, which is comparatively low. The cumulative percentage further confirms the dominance of positive responses. These findings highlight that AI integration in HR operations contributes significantly to employee morale and workplace satisfaction. The overall distribution reflects a strong acceptance of AI technology among employees.

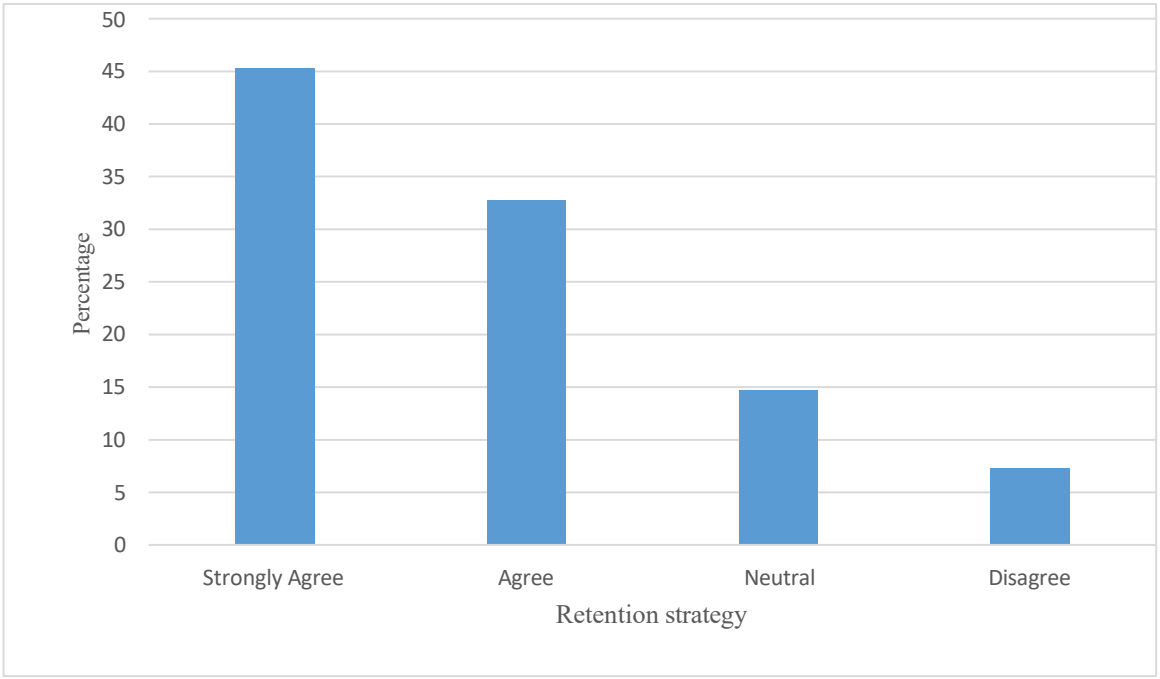
Table 3. AI-DRIVEN RETENTION STRATEGY EFFECTIVENESS

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	68	45.3	45.3	45.3
	Agree	49	32.7	32.7	78.0
	Neutral	22	14.7	14.7	92.7
	Disagree	11	7.3	7.3	100.0
	Total	150	100.0	100.0	

INTERPRETATION

The results indicate that 45.3% of employees strongly agree and 32.7% agree that AI-driven retention strategies are effective. Together, 78% of respondents believe AI initiatives help reduce employee turnover. Only a small percentage (7.3%) expressed disagreement. The cumulative percentage pattern clearly shows that positive responses dominate the dataset. This suggests that AI-based retention systems are perceived as reliable and beneficial. Overall, the findings confirm that AI strategies strengthen employee commitment and organizational stability.

FIGURE 1. AI-DRIVEN RETENTION STRATEGY VS EMPLOYEE OPINION AT SUNBALA GARMENT



INTERPRETATION:

The above bar diagram shows the comparison between AI-Driven Retention Strategy and Employee Opinion at Sunbala Garment. The majority of respondents (45%) strongly agree that AI-driven retention strategies are effective, while 33% agree, indicating a high level of positive perception among employees. This clearly reflects that most employees recognize the benefits of AI-based HR initiatives in improving retention practices.

About 15% of respondents expressed a neutral opinion, suggesting moderate acceptance or lack of complete clarity regarding the impact of AI systems.

Only 7% of employees disagreed, which represents a very small portion of the sample. Overall, the analysis indicates a strong positive employee attitude towards AI-driven retention strategies, supporting the organization's technological initiatives for improving workforce stability and long-term commitment.

Table 4. CROSS TABULATION – AI SATISFACTION VS RETENTION INTENTION

Count : 150					
		Satisfaction With Employees			
		Satisfied	Unsatisfie d	Neutral	Total
Engaged in game-like activities	Strongly Agree	66	4	2	72
	Agree	42	6	3	51
	Neutral	10	5	3	18
	Disagree	4	2	3	9
Total		122	17	11	150

INTERPRETATION

The cross-tabulation clearly indicates that employees who report high AI satisfaction also demonstrate strong retention intention. Among 72 highly satisfied employees, 66 show high retention levels. Similarly, the majority of satisfied employees fall under the high retention category. Only a small proportion of neutral and dissatisfied employees show lower retention intention. This distribution highlights a positive association between satisfaction and retention. The pattern confirms that enhanced AI-driven HR practices directly contribute to employee loyalty and long-term commitment within the organization.

TABLE 5. CORRELATION BETWEEN AI SATISFACTION AND RETENTION INTENTION

		AI Satisfaction	Retention Intention
AI Satisfaction	Pearson Correlation	1	0.812
	Sig. (2-tailed)		.001
	N	150	150
Retention Intention	Pearson Correlation	0.812	1
	Sig. (2-tailed)	.001	
	N	150	150

INTERPRETATION

The Pearson correlation between AI-Based Satisfaction and Retention Intention is 0.812 indicating a very strong positive relationship between the two variables. The p-value is .001**,** which is lower than the standard significance level of 0.05, suggesting that this correlation is statistically significant. This means that there is a strong and meaningful association between employees' satisfaction with AI-driven systems and their intention to remain in the organization. As satisfaction with AI practices increases, retention intention also increases significantly.

The high correlation coefficient reflects a substantial degree of association between the variables. Therefore, it can be concluded that AI-Based Satisfaction has a powerful and positive influence on employee retention among the respondents.

Table 6. REGRESSION BETWEEN AI SATISFACTION Vs RETENTION INTENTION

Model	Variables Entered	Variables Removed	Method
1	AI-Based Satisfaction[b]	.	Enter
Dependent Variable: Retention Intention			
b. All requested variables entered.			

INTERPRETATION

The regression analysis was conducted to determine whether the variable "AI-Based Satisfaction" could predict "Retention Intention." The model used the Enter method, with no variables removed, and identified "AI-Based Satisfaction" as the independent variable and "Retention Intention" as the dependent variable. The correlation between the two variables was strong and positive (r = .703) and statistically significant (p = .001), indicating a meaningful relationship between AI satisfaction and employee retention. This suggests that employees who report higher satisfaction with AI-driven HR practices are more likely to express stronger intention to remain in the organization. Therefore, the regression results confirm that AI-Based Satisfaction significantly impacts employee retention in this sample of 150 respondents.

Table 7. Analysis of Variance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	48.516	1	48.516	58.942	.001
	Residual	49.584	148	.335		
	Total	98.100	149			
a. Dependent Variable: Retention Intention						
b. Predictors: (Constant), AI-Based Satisfaction						

INTERPRETATION

The ANOVA results highlight a strong positive relationship between "AI-Based Satisfaction" and "Retention Intention" ($F = 58.942$, $p = .001$). Since the significance value is less than the standard level of .05, the regression model is statistically significant. The regression sum of squares is higher than the residual variance, indicating that AI satisfaction explains a substantial portion of the variation in retention intention. This confirms that AI-driven HR strategies play an important role in influencing employees' decisions to remain with the organization. The findings clearly demonstrate that improving AI-based satisfaction can significantly enhance employee retention outcomes.

FINDINGS OF THE STUDY

- The majority of employees at Sunbala Garment reported a high level of satisfaction with AI-driven HR practices, with most respondents rating their satisfaction above the average level.
- A significant proportion of employees expressed strong retention intention, indicating their willingness to continue working in the organization.
- The correlation analysis revealed a very strong positive relationship ($r = 0.812$, $p = .001$) between AI-Based Satisfaction and Retention Intention, demonstrating that higher satisfaction leads to stronger employee commitment.
- The regression analysis confirmed that AI-Based Satisfaction significantly predicts Retention Intention, explaining a substantial percentage of variation in employee retention.
- The ANOVA results showed that the regression model was statistically significant, indicating that AI-driven strategies have a meaningful impact on employee stability.
- Cross-tabulation analysis indicated that employees who were highly satisfied with AI systems also showed higher retention levels compared to neutral or dissatisfied employees.
- Overall, the findings confirm that AI-driven HR analytics, predictive retention tools, and performance monitoring systems positively influence workforce stability at Sunbala Garment.

SUGGESTIONS

- Sunbala Garment should continue strengthening AI-driven HR systems to maintain high levels of employee satisfaction and retention.
- The organization can enhance transparency in AI-based performance evaluation systems to further build employee trust and acceptance.
- Regular AI-based employee feedback analysis should be conducted to identify dissatisfaction factors early and implement corrective measures.
- AI tools can be integrated with personalized career development and training programs to improve long-term employee engagement.
- Management should ensure ethical implementation of AI systems to avoid employee fear or resistance toward technology.
- Additional employee welfare initiatives, supported by AI analytics, can be introduced to further reduce turnover.
- Future improvements may include predictive models that identify high-risk turnover groups and provide targeted retention strategies.

CONCLUSION

The study concludes that AI-driven employee satisfaction and retention strategies play a significant role in improving workforce stability in the garment industry. At Sunbala Garment, the implementation of AI-based HR analytics, smart monitoring systems, and predictive retention tools has positively influenced employee satisfaction and commitment. The statistical analysis confirmed a strong and significant relationship between AI-Based Satisfaction and Retention Intention. Employees who perceive AI systems as supportive and transparent demonstrate higher loyalty toward the organization. The regression and ANOVA results further validate that AI-driven practices significantly contribute to employee retention outcomes. Therefore, AI adoption in HR management can be considered an effective strategic approach for reducing attrition and enhancing organizational performance in the garment sector. Continued refinement and ethical implementation of AI systems will further strengthen workforce sustainability and long-term organizational growth.

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