Role of Artificial Intelligence in Handling Emotions and Organizational Conflicts and Prediction of Job Satisfaction of Information Technology Employees

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Abstract: Background and Aim: Artificial Intelligence is the involvement of technology or computers to perform the process of human activities. Emotional Intelligence and conflicts are interrelated and both should have proper control over one another to have a better work performance among the employees. The study aims to identify the role of Artificial Intelligence in handling Emotions and organizational conflicts and predict the satisfaction level of employees in the Information Technology sector.

Methods: Descriptive research is the type of research adopted for the research study. The target sample of the study was collected from Information Technology employees who are working in different fields of the IT sector. The total sample of the study comprises 224 employees in companies from Chengalpattu district. Statistical techniques like the Structural Equation model using Amos and the prediction of Job satisfaction using MATLAB are also computed.

Results: The findings of the research results show that there is a cordial relationship between Artificial Intelligence, Emotions, and Organizational conflicts in the Workplace along with job satisfaction. The predicted results of job satisfaction are also depicted in the results.

Conclusion: Based on the study findings it was concluded that the individual's Emotions and organizational conflicts can be resolved and managed through Artificial Intelligence using the methods suggested by it. This will help the organization to make fruitful decisions.

Keywords: Artificial Intelligence (AI), Emotional Intelligence (EI), Organizational Conflicts

Introduction

Artificial Intelligence refers to the capacity of a computer or a robot under computer control to carry out operations that are typically associated with human intellectual processes, including reasoning. Artificial intelligence (AI) studies the intelligence of machines through which these machines replace or do the work of human beings without the intervention of humans.[1] Artificial Intelligence is a system that makes decisions to increase its chances of success. The study of ideas gives computers the ability to do actions that give the impression of intelligence. some of the factors like Reasoning, Expertise, planning, studying, communicating, perceiving, and the capacity to move and manipulate objects are among the fundamental ideas of Artificial intelligence.[2]

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Emotional Intelligence is the capability of individuals to identify their own emotions and the emotions of other individuals or co-workers. Emotional Intelligence is used for the level of competence in individual personal and interpersonal skills.[3] A wide range of subskills make up EI, such as the ability to identify and evaluate emotions in ourselves and others, monitor moods and emotions, and apply this information to inform our decisions and behaviors. It consists of motivation, optimism, adaptability, assertiveness, and impulse control.[4]

Conflict cannot be avoided if businesses utilize work teams because it is an unavoidable feature of these groups. Conflict is the result of actions. It is essential to human existence. Conflict arises wherever there is interaction. Conflict is the outward manifestation of animosity, prejudice, hostility, aggressiveness, competition, and miscommunication. It is also linked to circumstances where two competing organizations have contradictory interests. It can be characterized as an argument between two or more people or

groups, with each party attempting to convince the other to agree with its point of view. [5]

Job satisfaction is a broad and complex term that can signify different things to different individuals. Motivation and job satisfaction are typically associated, yet it's unclear how the two relate to one another. Motivation and satisfaction are two different things. More than anything, job satisfaction is an attitude or an interior condition. It might, for instance, be connected to a subjective sense of accomplishment, whether it be qualitative or quantitative. [6] Natural language processing skills enable virtual assistants to comprehend and reply to client inquiries, facilitating interactive and conversational interactions. Thus, via smooth and effective interactions, firms can improve customer happiness, engagement, and loyalty.[7]

Literature Reviews

Artificial Intelligence

Humaid AI Naqbi et al., (2024) researched enhancing job productivity by using Artificial Intelligence. The study gives useful insights into Generative Artificial Intelligence (GAI) in enhancing the outputs and work productivity with a clear point on various industries like research, academics, technology, communication, government, agriculture, and business. The researchers have conducted a detailed analysis of GAI its applications, and projecting the future data. The main aspect of the study is to identify the various tools like chatbots, ChatGPT, and conversational agents for the evolution of GAI. The study results show that there is a huge trend in the GAI research which is expected to develop in the upcoming years. This enhanced the Generative Artificial Intelligence design and long-term planning in assessing the impacts of users across the world. [8]

Emotional Intelligence

Muzzamil Rehman (2024) studied how Artificial Intelligence is mediating Investment decisions by handling emotions through Emotional Intelligence. The study involves an in-depth relationship between EI and Artificial Intelligence in mediating the Decisions of Investment. The research studies how human emotional intelligence helps in making Investment decisions through Artificial Intelligence between minds and machines. The study reveals that Emotional Intelligence not only impacts Investment decisions directly but is also influenced indirectly by Artificial Intelligence. The study results show that Artificial Intelligence impacts the investment decisions of individuals through emotional intelligence. Both AI and EI increasingly integrate with financial decision-making between the minds and machines for investments.[9]

Organizational Conflict

Ogwuche Gabriel Shaibu and Christian .O. Njoku (2024) studied the strategies of Conflicts in Organizations and Innovation for the performance of employees. The study aimed at identifying the concepts of conflict, various dimensions involved, sources, stages, and the role of conflict along with the strategies to manage such conflicts which affect the employee's performance. The major causes for such conflicts include poor management, communication gap, and competition which may have a direct negative impact on individuals as well as groups. This might even reduce the performance of the employees. The study concludes that to have proper control over organizational conflict, the environment plays a major role in increasing productivity and reducing conflicts. [10]

Job satisfaction

Benjamin Dreer (2024) investigated the well-being of teachers and their job satisfaction involving the emotions in workplace. The study highlights the correlation between well-being and job satisfaction. This helps in investigating the extent to which positive emotions, employee engagement, and achievements are related to job satisfaction. The study was analyzed with a total of 511 teachers from schools. The study results show that the wellbeing of the teachers is highly related to the emotions in the workplace and plays a huge role in the job satisfaction among the teachers which helps in their retention.[11]

Research Methodology

Research Methodology depicts the way through which the entire research study is carried out. This includes the type of research adopted, methods used for the study, statistical analysis used to find out the results, samples, design, etc. Without these components, one cannot proceed with his /her research.[12]

Research Gap

Based on the literature reviews, the research gap for the current study is found. The

earlier studies have not concentrated on predicting the job satisfaction of IT employees, and the involvement of Artificial Intelligence in managing and resolving emotions and conflicts.

Objectives of the study

The study consists of the following research objectives:

1. To identify the role of Artificial Intelligence in managing emotions and resolving conflicts
2. To predict the Job satisfaction of the Employees

Type of Research adopted

The researcher has adopted a Descriptive form of research for the current study.

Sampling Method and sample size.

The snowball sampling method is used to collect data from the Information Technology Employees who are working in various departments of the IT industry with a total sample size of 224 employees from companies in the Chengalpattu district.

Types of Data Collection

The researcher has adopted primary sources as well as secondary sources for the current study. The primary source of information is collected using framed questionnaires and secondary data is collected using different websites, theses, and research articles.

Statistical Analysis

The study results were identified using Structural Equation Modelling using SPSS AMOS and prediction analysis using MATLAB.

Structural Equation Model

The Structural Equation Models are hypotheses that describe the connections between latent variables and observed variables as well as the relationships between the two. Latent variables are those that are conceptually understood by humans but are not directly measurable. The current study aims to understand the relationship between Artificial Intelligence, Emotional Intelligence, Conflicts, and Job satisfaction.

Null Hypothesis: The Structural Equation Model does not have a perfect fit

Figure 1 shows the Structural Equation model of AI, EI, Organizational Conflicts, and Job Satisfaction
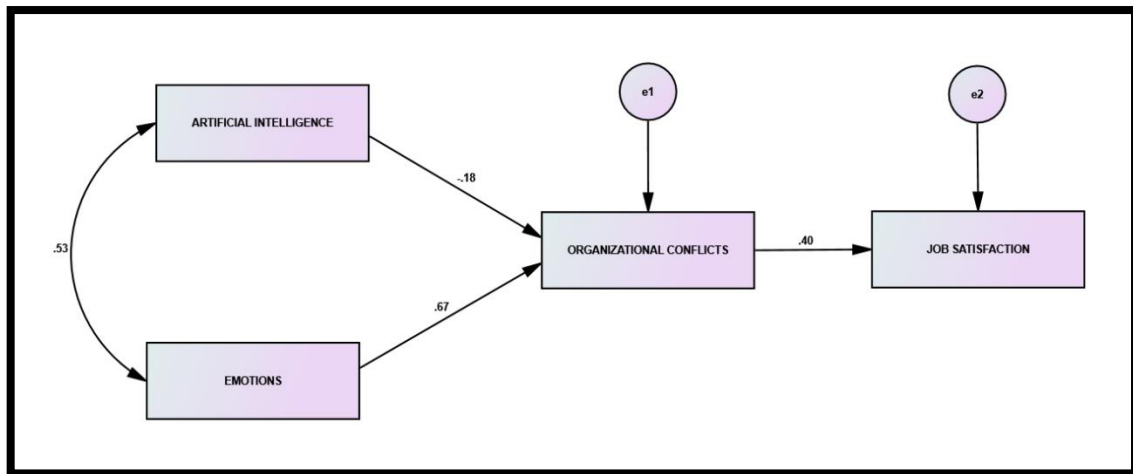
Source: Computed data

Table 1 shows the Fitness of Model Measures

Measures	Estimates	Thumb rule	Interpretation
CMIN	1.729	--	--
DF	2	--	--
CMIN/DF	0.864	1 and 3	***
CFI	1.000	Greater than 0.95	***

SRMR	0.022	Less than 0.08	***
RMSEA	0.000	Less than 0.06	***
PClose	0.595	Greater than 0.05	***

Source: Computed data

Table 2 Covariances

			Estimate	S.E.	C.R.	P
Artificial Intelligence	<-->	Emotions	17.382	2.496	6.963	***

Source: Computed data

Table 3 Weights of Regression

			Estimate	S.E.	C.R.	P
Conflict	<---	Artificial Intelligence	-.076	.027	-2.795	.005
Conflict	<---	Emotions	.770	.072	10.672	***
Job Satisfaction	<---	Conflict	.290	.045	6.475	***

Source: Computed data

Table 4 Standardized Regression Weights

			Estimate
Conflict	<---	Artificial Intelligence	-.176
Conflict	<---	Emotions	.673
Job Satisfaction	<---	Conflict	.398

Source: Computed data

Inference

Table 1 displays the model fit measures with its recommended threshold limits. From the table, all the model fit measures satisfy the recommended limits. The CMIN/DF value is 0.864 which is less than 5, the GFI value is 0.996 greater than 0.9, the AGFI value is 0.981 which is greater than 0.9, CFI value is 1.000 which is greater than 0.9, the value SRMR is 0.022 which is < 0.08, the value of TLI is 1.004 which is > than 0.9 and the value of RMSEA is 0.000 which is < 0.05, and the value of P close is 0.595 which is > 0.05 and Hence, it can be concluded that the null hypothesis, is rejected. This shows that the SEM has a perfect fit with its variables.

Prediction Analysis

The method of utilizing data to project future results is known as predictive analytics. To identify patterns that might indicate future behavior, the procedure makes use of statistical models, machine learning, artificial intelligence, and data analysis. Businesses may make extremely accurate predictions about patterns and behaviors that will emerge seconds, days, or years from now by utilizing both historical and present data. Here, the researcher has predicted the Job satisfaction of the employees using the past years' scores to predict the present and future scores by using MATLAB through Machine Learning and Deep Learning.[13]

ML and DL (Machine Learning / Deep Learning)

Machine learning is the investigation of creating statistical models and algorithms that allow computers to detect and make decisions without explicit programming. It entails teaching algorithms on big datasets to identify patterns and relationships and then applying patterns to forecast or decide what to do with fresh data.

On the other hand, deep learning is a part of machine learning that investigates in-depth patterns and relationships in data using multilayered neural networks. It has demonstrated success in a

range of tasks, including natural language processing, speech recognition, and computer vision, and is inspired by the structure and functions of the human brain.[14]

Prediction process

The research has collected the Job satisfaction scores of the employees from the year 2020 to 2023 and predicted the scores for the year 2024. These predictions are done using Artificial Intelligence by Machine Learning.

Predicted Job Satisfaction Score For The Year 2024

Table 5 shows the Predicted Job Satisfaction Scores based on the Past Scores

Respondent	2020	2021	2022	2023	2024 Predicted score	Respondent	2020	2021	2022	2023	2024 Predicted score
1	77	81	63	59	70.75	30	50	61	79	63	54.1667
2	74	49	55	70	71.2	31	45	73	57	77	69.6
3	81	69	63	47	60.7143	32	55	57	53	55	66.75
4	71	65	65	54	66.5	33	51	49	41	69	71.2
5	70	77	66	52	67.6667	34	59	60	72	60	78.5
6	53	64	69	66	65.5	35	65	59	56	61	75.875
7	64	67	67	76	49.5	36	72	72	79	71	50.375
8	52	64	66	58	45.8	37	71	81	49	72	70.75
9	61	77	70	69	68.75	38	61	60	76	77	60.3333
10	70	65	59	58	66.5	39	62	73	59	62	67.6667
11	67	54	52	68	71.2	40	79	67	65	63	49.5
12	73	57	72	69	61.2857	41	57	78	50	77	55.6
13	71	61	63	80	78.2	42	53	72	71	67	52.25
14	78	55	58	76	56.75	43	41	76	74	78	69.6
15	30	82	47	57	70.75	44	72	47	70	67	75.5
16	82	64	61	54	45.8	45	56	59	78	72	54.1667
17	54	68	39	54	76.5	46	79	60	70	53	69.2
18	61	54	56	54	78.5	47	49	73	75	76	60.5556
19	51	74	42	45	60.7143	48	76	77	58	65	59.8
20	79	52	50	33	75.875	49	59	74	43	69	68.75
21	64	76	45	79	60.5556	50	65	81	60	69	70.75
22	53	43	55	59	66.2857	51	50	71	53	75	60.5556
23	57	51	51	77	65.1429	52	71	70	72	73	62.7143
24	43	64	59	55	45.8	53	74	53	76	79	61.2857
25	34	62	65	80	60.3333	54	70	64	73	77	65.5
26	37	71	72	62	61	55	78	52	83	64	54.1667

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27	34	46	71	74	69.4	56	70	61	83	63	54.1667
28	52	76	61	63	76.75	57	75	70	77	47	50.8
29	42	62	62	66	78.2	58	58	67	37	57	76.5
59	43	73	70	66	52.25	125	79	66	74	58	75.6667
60	60	71	59	59	76.75	126	77	76	58	81	62.7143
61	53	78	70	63	61	127	64	58	72	57	69.2
62	72	30	47	54	79.75	128	63	69	77	74	75.6667
63	76	82	54	48	70.75	129	47	58	77	60	66.75
64	73	54	52	61	75.875	130	57	68	83	81	75.6667
65	52	61	66	38	66.75	131	66	69	59	49	66.5
66	68	51	76	71	75.5	132	59	80	69	69	68.75
67	66	79	58	50	67.6667	133	63	76	59	65	67.6667
68	83	64	69	78	65.5	134	54	57	68	77	60.3333
69	83	53	58	77	56.75	135	48	54	56	64	56.75
70	77	57	68	79	61.2857	136	61	54	73	67	69.4
71	37	43	69	81	60.3333	137	38	54	57	64	56.75
72	70	34	80	59	66.2857	138	71	45	49	77	65.1429
73	59	37	76	64	69.4	139	50	33	60	65	56.75
74	70	34	57	61	66.2857	140	78	79	59	54	59.8
75	47	52	54	74	65.1429	141	77	59	72	57	69.2
76	54	42	54	72	65.1429	142	79	77	81	61	50.375
77	52	50	54	79	65.1429	143	81	55	60	55	75.875
78	66	45	45	85	65.1429	144	59	80	73	82	64.3333
79	76	55	33	54	79.75	145	64	62	67	64	75.5
80	58	51	79	54	78.5	146	61	74	78	68	68.75
81	69	59	59	86	56.75	147	74	63	72	54	65.5
82	58	65	77	74	75.6667	148	72	66	76	74	75.6667
83	68	72	55	83	60.5556	149	79	63	47	52	56.6
84	69	71	80	63	61	150	85	77	59	76	62.7143
85	80	61	62	65	61.2857	151	54	55	60	43	66.75
86	76	62	74	54	69.2	152	54	69	73	51	75.6667
87	57	79	63	89	64.3333	153	86	60	77	64	54.1667
88	54	57	66	68	69.4	154	74	61	74	62	61.2857
89	54	53	63	64	78.2	155	83	71	81	71	50.375
90	54	41	77	67	54.1667	156	63	72	71	46	60.7143

91	45	72	55	78	69.6	157	65	77	70	76	55.6
92	33	56	69	79	60.3333	158	54	62	53	62	61.6
93	79	79	60	82	62.7143	159	89	63	64	61	56.6
94	59	49	61	76	56.75	160	68	77	52	73	55.6
95	77	76	71	54	50.375	161	64	67	61	57	76.5
96	55	59	72	62	69.4	162	67	78	70	49	67.8571
97	80	65	77	42	50.8	163	78	67	67	60	66.5
98	62	50	62	54	66.2857	164	79	72	73	59	50.375
99	74	71	63	63	50.375	165	82	53	71	72	61.2857
100	63	74	77	66	52.25	166	76	76	78	81	62.7143
101	66	70	67	60	61	167	54	65	30	60	76.5
102	63	78	78	44	50.8	168	62	69	82	73	75.6667
103	77	70	67	33	60.7143	169	42	69	54	67	49.5
104	55	75	72	67	52.25	170	54	75	61	78	60.5556
105	69	58	53	43	75.875	171	63	73	51	72	60.5556
106	60	43	76	77	60.3333	172	66	79	79	76	64.3333
107	61	60	65	56	78.5	173	60	77	64	47	60.7143
108	71	53	69	79	75.5	174	44	64	53	59	45.8
109	72	72	69	80	62.7143	175	33	63	57	60	56.6
110	77	76	75	73	62.7143	176	67	47	43	73	65.1429
111	62	73	73	77	60.5556	177	43	57	34	77	61.6
112	63	52	79	48	69.2	178	77	63	37	74	56.6
113	77	68	77	63	75.6667	179	56	62	34	81	61.6
114	67	66	64	59	66.5	180	79	61	52	71	61.6
115	78	83	63	79	70.75	181	80	49	42	70	71.2
116	67	83	47	82	70.75	182	73	48	50	53	66.2857
117	72	77	57	61	59.8	183	77	59	45	64	61.6
118	53	37	64	77	78.2	184	48	44	55	52	66.2857
119	76	70	61	65	59.8	185	63	71	51	61	67.6667
120	65	59	63	80	78.2	186	59	51	59	70	56.75
121	69	70	50	56	67.6667	187	79	76	65	67	50.375
122	69	47	41	68	71.2	188	37	78	72	73	69.6
123	75	54	63	66	61.2857	189	70	79	71	71	64.3333
124	73	52	48	52	79.75	190	59	80	61	78	64.3333
191	70	61	62	30	75.875	209	33	81	75	51	70.75

|										
192	47	70	79	82	60.5556	210	79	79	58	59	59.8
193	54	64	57	54	45.8	211	59	79	43	65	76.75
194	52	73	53	61	76.75	212	54	72	60	72	60.5556
195	66	69	41	51	66.5	213	52	77	53	71	55.6
196	76	63	72	79	65.5	214	66	72	72	61	61
197	58	67	56	64	49.5	215	76	73	76	62	50.375
198	69	75	79	53	67.8571	216	58	79	73	79	64.3333
199	58	45	49	57	66.2857	217	69	62	52	57	75.875
200	68	63	76	43	65.5	218	58	79	68	53	67.8571
201	69	73	59	34	60.7143	219	68	63	66	41	56.6
202	80	61	65	37	75.875	220	69	78	83	72	55.6
203	76	67	50	34	60.7143	221	62	73	83	56	67.8571
204	57	74	71	52	67.8571	222	42	74	77	79	69.6
205	54	78	74	42	50.8	223	54	51	37	49	79.75
206	54	75	70	50	67.8571	224	63	65	70	76	75.6667
207	54	76	78	45	50.8						
208	45	80	70	55	67.8571						

Source: Computed Data

Prediction Charts

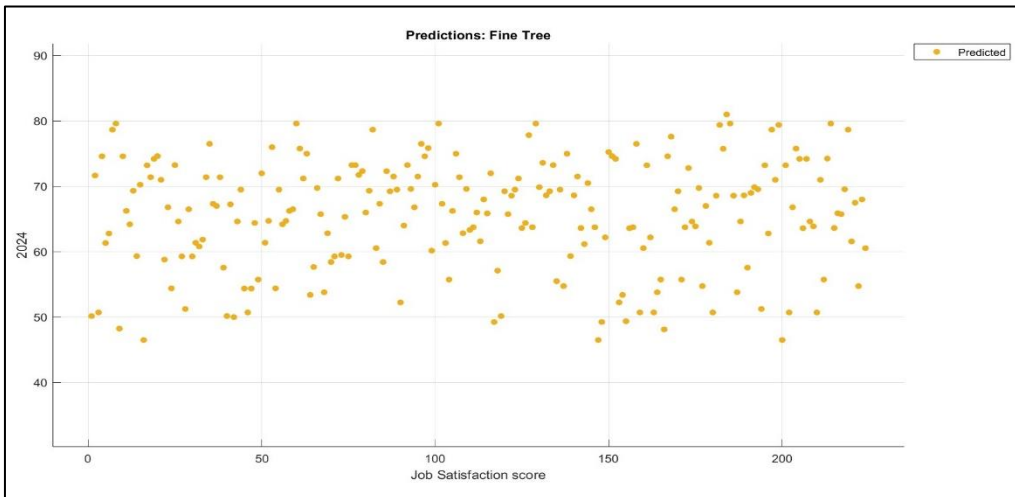**Chart 1 shows the Job satisfaction score from 2020 to 2024**
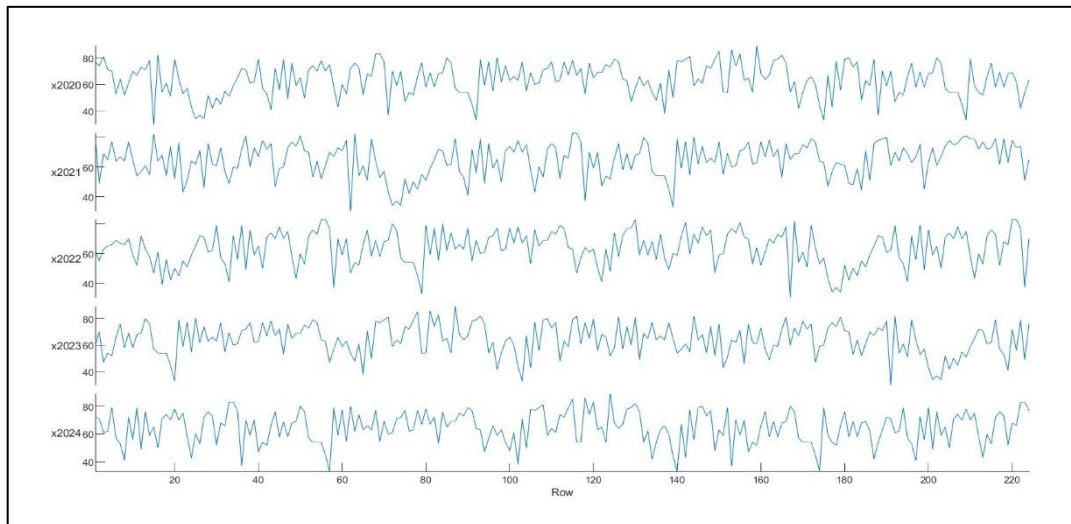
Source: Computed Data

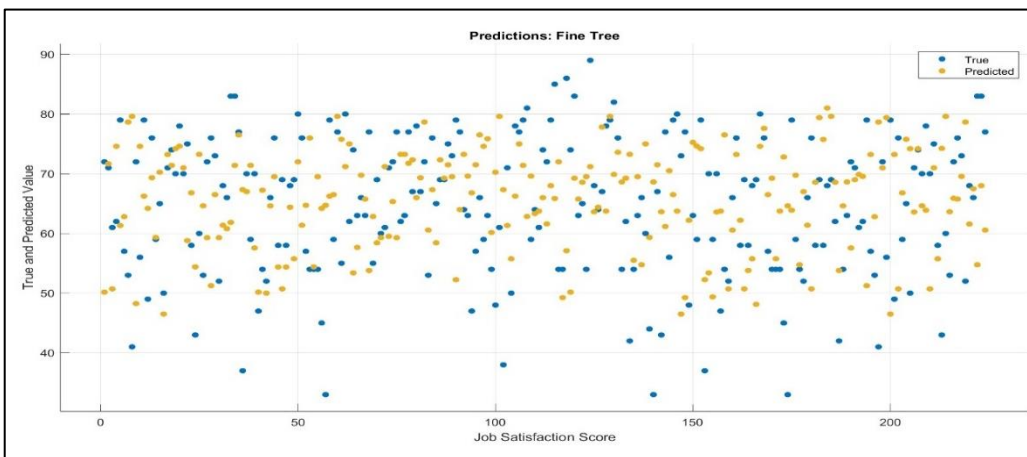**Chart 2 Shows the Job satisfaction Scores for the Year 2023**
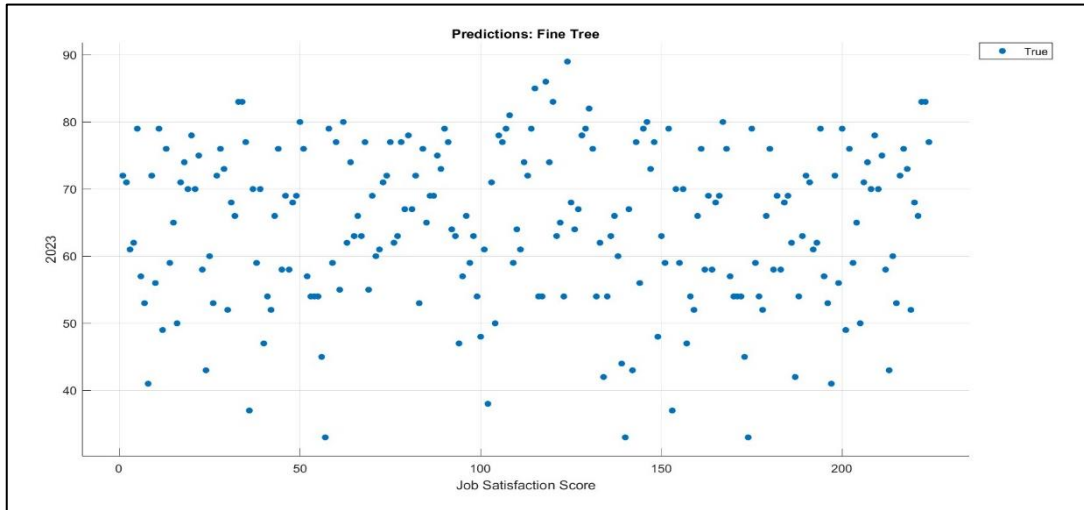
Source: Computed Data

Chart 3 Shows the Job Satisfaction Score (Predicted Scores for the year 2024)

Source: Computed Data

Chart 4 Shows the Comparison of Job Satisfaction Scores for the year 2023 and 2024(Predicted Year)

Source: Computed Data

Findings And Discussion

From the research results it was found that Artificial Intelligence helps in managing emotions and resolves the organizational conflicts which arise in the organization. Artificial Intelligence helps in identifying the different emotions of every IT employee individually and suggests how to manage their emotions. On the other hand, Organizational Conflicts can be reduced through some ways like Early identification of Conflicts, Data-driven analysis of conflicts, Conflict resolution strategies in a personalized manner, Sentimental Analysis for insights of Emotions, Artificial Intelligence training programs, Learning from Feedback, Balancing Artificial Intelligence along with Human judgments. All these are some of the strategies which are suggested by Artificial Intelligence in managing emotions as well as resolving organizational conflicts. The output of the Structural Equation model displays that the model has a perfect fit which shows that there is a relationship between the variables mentioned in the study. The prediction analysis results show the predicted values based on the past job satisfaction score data from the year 2020 to 2023. These past years' data were used to predict the current year of the future year data that is for the year 2024. The predicted scores show a minute difference between the past data and the current data along with the predicted future data.

Conclusion

Artificial Intelligence helps in managing the Emotions of Individuals in the Information Technology Industry and resolves the conflicts that emerge in companies frequently. AI provides several insights into managing these two variables and helps in predicting the future of the relevant variable. The Employee Job satisfaction scores of all employees were identified predicted or forecasted using the relevant past data. Hence, every aspect of the employees can be predicted using such tools soon. To conclude, Artificial Intelligence assists in managing emotions and Conflict resolution. Artificial Intelligence helps by giving warning signals of conflict, and planning counseling sessions for employees if required.

Recommendations

Some of the recommendations which can be considered are:-

1. Artificial Intelligence assists the business partner Human Resource teams in scheduling Ice-breaking events.
2. Early Conflict Identification, Personalized conflict resolution strategies, AI-driven Training Programs, and sentimental analysis are some of the strategies that can be adopted with the aid of Artificial Intelligence.
3. The Job satisfaction of the employees can be predicted with the help of Artificial Intelligence to have a better understanding of their employees and make fruitful decisions.

Competing Interests

The authors declare that they have no financial or personal relationships that may have inappropriately influenced them in writing this article.

Ethical Considerations

This article followed all ethical standards for research without direct contact with human or animal subjects.

Authors Contributions

S is the corresponding author for this article and A has supervised this article.

Data Availability

The data that support the findings of this study are available from the author upon reasonable request.

Disclaimer

The views and opinions expressed in this article are those of the authors and do not necessarily reflect the official policy or position of any affiliated agency of the authors.

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