

Mapping Employee Wellbeing Through Ayu Typology: Ancient Indian Wisdom Meeting Modern HR Practices in Indian Organizations - A Study of 1,350 Employees Across Five Sectors

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Abstract:

Ancient Indian philosophical system of Ayurveda offering holistic framework for understanding wellbeing through four Ayu categories: Hitayu (wholesome/beneficial), Sukhayu (pleasant/satisfactory), Ahitayu (harmful/unwholesome), and Dukhayu (suffering/painful). This framework going far beyond Western approaches which focusing mainly on satisfaction or engagement.

This research is integrating this ancient Ayurvedic wisdom with modern HR analysis. We studied 1,350 employee reviews collected from [Ambitionbox.com](https://www.ambitionbox.com), representing employees from 15 major Indian companies across 5 sectors (Automobile, Banking, FMCG, Insurance, NBFC) and 3 designation levels (Entry Level, Middle Level, Top Level).

Using contextual Natural Language Processing and traditional keyword-based analysis, we coded each review into Ayu typology framework. Then using One-Way ANOVA statistical test to compare whether employee experience is different across sectors and designation levels..

Keywords:

Indian Knowledge System, Hitayu, Sukhayu, Ahitayu, Dukhayu, NLP, Employee review, organizational culture, holistic HR, employee wellbeing

Introduction:

"Sukhyam Arogya Siddhi Hetuh"

Health and wellbeing is foundation of all achievements.

Charaka Samhita

In modern organizations, employee wellbeing is critical component for organizational success. But how we measuring wellbeing? Traditional Western frameworks focusing mainly on job satisfaction or engagement levels. These frameworks limited because they not capturing full picture of what making employee experiencing healthy, satisfactory, harmful, or painful work environment.

Ancient Indian philosophical system of Ayurveda offering different approach. Ayurveda is traditional system developed over thousands of years in India. It not only focusing on physical health but on holistic wellbeing - integrating physical, mental, emotional, and spiritual dimensions. In Ayurvedic text Charaka Samhita, ancient sage Charaka describing four categories of life (Ayu):

1. Hitayu - Wholesome life or beneficial existence
2. Sukhayu - Pleasant life or satisfactory existence
3. Ahitayu - Unwholesome life or harmful existence
4. Dukhayu - Painful life or suffering existence

These categories reflecting comprehensive view of wellbeing. It not only asking "is employee satisfied?" but asking "is the work wholesome and beneficial for employee? Is it pleasant? Is there harmful aspects? Is there suffering?"

This framework offering much richer understanding than traditional approaches.

For long term sustainability and growth, organisation should put more emphasis on employee's perception about the organization. Website like <https://www.ambitionbox.com/reviews>, <https://www.glassdoor.co.in/Reviews/index.htm>, showcase experiences of the employees in an open manner. If systematically analysed, those reviews can provide actionable insights about the employee satisfaction, organizational culture etc. Many researches were conducted using model like BERT sentiment analysis tools to classify such reviews as either positive or negative. this binary model may not properly analyse the complex emotional and experiential states of the employees. For example, not all positive reviews reflect well-being, and not all negative reviews expressed dissatisfaction. To bridge this interpretive gap, this study proposes an unique analytical framework inspired by the Charaka Samhitā, a foundational text of Ayurvedic knowledge. Ayurveda classifies life experiences into four categories of Ayu: Hitayu (the wholesome life), Sukhayu (the pleasurable life), Ahitayu (the harmful life), and Dukhayu (the painful life).

This research not only enhances the precision of review interpretation but also contributes to the broader goal of integrating indigenous knowledge systems into modern management science.

Literature review:

There are significant changes and advances happened in recent days in Natural Language Processing. Which enable us to do deeper analysis of employee reviews from platforms like AmbitionBox and Glassdoor. It stretches its boundaries, revealing more than just positive or negative sentiment. Studies such as Zhang et al. (2023) demonstrated how fine-tuned BERT models outperform traditional classifiers in capturing nuanced workplace emotions within Glassdoor reviews. Similarly, Mutinda et al. (2023) introduced the LeBERT model, blending BERT with sentiment lexicons and CNNs to improve accuracy, especially in informal or complex review language.

Li et al. (2024) further confirmed BERT's strength in interpreting varied tones in online commentary, a feature essential for understanding employee narratives.

Research consistently showing that junior/entry-level employees having significantly different experience than senior employees (Chen et al., 2019; Kapoor & Mehta, 2020).

Entry Level employees reporting:

Lower job satisfaction (Chen et al., 2019)

Higher stress and anxiety (Kapoor & Mehta, 2020)

Lower organizational commitment (Robinson & Kumar, 2020)

Limited career development opportunities (Gupta & Singh, 2019)

More vulnerable to exploitation and unfair treatment

Senior employees typically reporting higher satisfaction, but sometimes higher stress from management responsibilities.

However, limited research examining this through holistic Ayurvedic lens, particularly in Indian context.

Why This Research Important?

1. Gap in Knowledge: Most research using Western frameworks. Limited research applying Ayurvedic framework to modern organizational context, especially in India.
2. Indian Context: India having strong Ayurvedic tradition. Using this ancient wisdom in modern HR making the approach culturally appropriate and meaningful for Indian organizations.
3. Holistic Approach: Ayurvedic framework being truly holistic - not just focusing on positive (satisfaction) but also on negative (harm, suffering), AND on presence of beneficial and pleasant aspects.
4. Employee Wellbeing Crisis: Indian organizations facing challenges with employee wellbeing, particularly Entry Level employees showing higher turnover and stress. New approaches needed.
5. Bridging Tradition and Modernity: This research demonstrating how ancient wisdom can inform modern management practices - creating bridge between traditional knowledge and contemporary HR.

Research Objective:

Main Research Question

“How can ancient Ayurvedic Ayu typology framework help us understanding employee wellbeing in modern Indian organizations? And is employee experience different across sectors and designation levels?”

Specific Objectives

To understand and classify employee wellbeing using Ayurvedic Ayu typology (Hitayu, Sukhayu, Ahitayu, Dukhayu) in Indian organizational context.

To examine whether employee Ayu wellbeing perception differing across 5 major sectors (Automobile, Banking, FMCG, Insurance, NBFC).

To examine whether employee Ayu wellbeing perception differing across 3 designation levels (Entry Level, Middle Level, Top Level).

To identify which Ayu dimensions most significantly affected by designation level.

To provide recommendations for improving employee wellbeing by applying Ayurvedic holistic approach.

Research Methodology:

1. Research Design

This study employs a mixed-method, cross-sectional, and exploratory design, integrating Natural Language Processing (NLP) techniques with traditional Ayurvedic classifications (Ayu types) to assess employee sentiment. The aim is to classify employee experiences into four Ayu categories Hitayu, Sukhayu, Ahitayu, and Dukhayu- based on their self-reported “Like” and “Dislike” reviews.

2. Data Collection

Employee review data were manually collected from AmbitionBox, a popular Indian employer review platform. Reviews were selected across five sectors: Automobile, FMCG, Banking, NBFC, and Insurance: from three representative companies per sector.

Total Reviews: 1350

Sectors:

Automobile: Maruti Suzuki, Mahindra & Mahindra, Tata Motors

FMCG: Hindustan Unilever Limited, Nestle India, Godrej Consumer Products

Banking: Axis Bank, ICICI Bank, HDFC Bank

NBFC: Chola mandalam, Bajaj Finance, Shriram Finance

Insurance: Axis Max Life, ICICI Prudential Life, HDFC Life

Selection Criteria:

Large, established, reputable organizations
 Having significant presence in India
 Having substantial number of reviews on Ambitionbox
 Representing major sectors in Indian economy
 Comparable organizational size

Sample Distribution:

Each sector: 270 reviews ($1,350 \div 5$)
 Each company: 90 reviews ($270 \div 3$)
 Each designation level: 450 reviews ($1,350 \div 3$)
 30 reviews from each category. Each review had two segments - Like and Dislike
 Entry Level: 450
 Middle Level: 450
 Top Level: 450
 This balanced design ensuring robust statistical analysis.

We developing coding framework based on Ayurvedic Ayu typology:

For each Ayu category, we identifying keywords from employee reviews:

Hitayu Keywords:

· Career growth, promotion, advancement, learning, development, training, skill building, opportunity, job security, career path, financial security, leadership development, performance recognition, ethical practices, transparent policies, meaningful work, professional growth

Sukhayu Keywords:

Good environment, friendly colleagues, supportive manager, work-life balance, flexible working, appreciation, recognition, team bonding, comfortable workplace, nice culture, fun at work, supportive system, belongingness, positive atmosphere, collaborative team

Ahitayu Keywords:

Politics, bias, discrimination, corruption, unfair treatment, exploitation, nepotism, unethical practices, lack of transparency, racism, sexism, harassment, favoritism, deception, manipulation, no integrity

Dukhayu Keywords:

Stress, anxiety, pressure, overload, long working hours, burnout, exhaustion, mental health issues, psychological suffering, suicidal thoughts, toxic culture, severe harassment, unbearable pressure, extreme stress, work-induced illness

Coding Process

Step 1: Text Preprocessing

- Converting review text to lowercase

- Removing special characters and extra spaces

- Cleaning punctuation

- Text standardization

Step 2: Context-Sensitive Analysis

- Not just keyword matching - understanding context

- Example: “no career growth” in dislikes = Ahitayu/Dukhayu (not Hitayu)

- Analyzing both likes and dislikes sections separately

- Considering negations and qualifiers

Step 3: Special Case Handling

- If employee writing “nothing” in likes section → interpreting as actually there being harmful aspects

- If employee writing “nothing” in dislikes section → interpreting as no significant negative aspects

- Handling sarcasm and complex language

Step 4: Scoring Calculation For each review:

- Counting keyword frequency for each Ayu category

- Calculating percentage: $(\text{Keyword count} \div \text{Total Ayu keywords found}) \times 100$

- Producing score 0-100 for each category

- If Ayu category having no keywords → NaN (missing value)

Step 5: Quality Check

- Manual review of subset of coded reviews

- Checking for accuracy and consistency

- Adjusting coding rules if needed

Techniques and Processes

Text preprocessing: Lowercasing, Removal of punctuation and special characters using regular expressions

Custom rule-based classification:

Matching against manually defined keyword lists for each Ayu category

Handling context-sensitive terms like "promotion" and "job security"

Special case logic for words like "nothing", "everything", and "na"

Keyword mapping: Separate dictionaries for Like and Dislike section, Contextual mapping to resolve sentiment ambiguity

Keywords =

'hitayu': 'like': 'promotion', 'promotions', 'career growth', 'growth', 'learning', 'development',
'ethics', 'job security', etc.

sukhayu': 'like': 'good environment', 'friendly team', 'supportive manager', 'work life balance',
'work culture', 'positive atmosphere', etc.

ahitayu': 'dislike': 'no promotion', 'no growth', 'not supportive',
'no career development', 'biased', etc.

'dukhayu': 'dislike': 'harassment', 'abuse', 'stress', 'work pressure',
'torture', 'insult', etc.

Scoring:

The final Ayu scores for each review were calculated by counting the number of keywords matches across the four categories: Hitayu, Sukhayu, Ahitayu, and Dukhayu. These raw scores were then transformed to percentages so that the values for each review would reflect the proportional distribution across all categories. For instance, if a review matched two Hitayu keywords and one Ahitayu keyword (out of three total matches), the final normalized scores would be:

Hitayu: 66.67%

Ahitayu: 33.33%

Sukhayu: 0%

Dukhayu: 0%

This percentage-based approach allowed for a comparative and weighted interpretation of each review's alignment with the four Ayu categories, rather than a binary classification.

Excel (.xlsx): Used for both input and output

Statistical Analysis

Descriptive Statistics

For each group (sector, designation), calculating:

Mean (M) - average Ayu perception

Standard Deviation (SD) - score variability

Sample Size (N) - number of reviews

Range - minimum to maximum

4.4.2 One-Way ANOVA

ANOVA is statistical test comparing means across multiple groups.

We conducting 8 ANOVA tests:

Sector-wise (4 tests):

Hitayu across 5 sectors

Sukhayu across 5 sectors

Ahitayu across 5 sectors

Dukhayu across 5 sectors

Designation-wise (4 tests):

Hitayu across 3 designation levels

Sukhayu across 3 designation levels

Ahitayu across 3 designation levels

Dukhayu across 3 designation levels

ANOVA Output:

F-statistic: Ratio of between-group variance to within-group variance

P-value: Probability that observed difference happened by chance

Significance level: $\alpha = 0.05$ (if $p < 0.05$, difference is statistically significant)

Post-Hoc Testing: Tukey HSD

When ANOVA showing significant result ($p < 0.05$), we using Tukey Honestly Significant Difference (HSD) test.

Tukey HSD comparing each pair of groups:

Entry Level vs Middle Level

Entry Level vs Top Level

Middle Level vs Top Level

If $p < 0.05$ for any pair, that pair showing significant difference.

Limitations:

There are certain limitations that must be considered.

1. The classification system is heavily reliant on pre-defined keywords and contextual rules.
2. Although efforts were made to include domain-relevant terms and handle negations and intensifiers, the subjective nature of language may still lead to occasional misclassifications.
3. If employees use sarcasm, ambiguity, result can be misleading.
4. All reviews were collected from a single online platform, AmbitionBox, which limits the diversity and may not fully capture the employee sentiments across the broader industry.
5. The representativeness of the sample could be improved by incorporating additional review platforms and primary data collection like survey or qualitative interviews.

Result and Analysis:

Overall Ayu Wellbeing Perception

Across all 1,350 reviews:

Ayu Category	Mean	SD	N	Range
Hitayu	36.31	37.74	1,012	0-100
Sukhayu	19.65	29.48	788	0-100
Ahitayu	27.24	34.75	896	0-100
Dukhayu	18.10	29.27	727	0-100

Interpretation:

Employees perceiving highest Hitayu (beneficial/wholesome aspects) - $M = 36.31$

Employees perceiving lowest Sukhayu (pleasant/satisfactory aspects) - $M = 19.65$

Moderate perception of Ahitayu (harmful aspects) - $M = 27.24$

Low perception of Dukhayu (suffering/pain) - $M = 18.10$

This pattern suggesting that employees recognizing beneficial aspects of work (Hitayu), but not finding work particularly pleasant or satisfactory (Sukhayu), AND not recognizing suffering (Dukhayu) even when there being harmful aspects (Ahitayu).

Sector Wise Ayu Wellbeing Perception

Automobile Sector (n=270):

Hitayu: M = 40.44, SD = 38.64

Sukhayu: M = 16.46, SD = 24.63

Ahitayu: M = 23.59, SD = 32.01

Dukhayu: M = 18.22, SD = 29.28

Banking Sector (n=270):

Hitayu: M = 34.84, SD = 32.19

Sukhayu: M = 20.40, SD = 28.27

Ahitayu: M = 29.22, SD = 31.59

Dukhayu: M = 21.73, SD = 28.68

FMCG Sector (n=270):

Hitayu: M = 31.41, SD = 36.20

Sukhayu: M = 21.67, SD = 30.62

Ahitayu: M = 23.70, SD = 33.03

Dukhayu: M = 15.22, SD = 27.80

Insurance Sector (n=270):

Hitayu: M = 38.74, SD = 39.58

Sukhayu: M = 23.83, SD = 33.30

Ahitayu: M = 30.98, SD = 37.37

Dukhayu: M = 20.51, SD = 32.22

NBFC Sector (n=270):

Hitayu: M = 36.04, SD = 40.72

Sukhayu: M = 15.56, SD = 28.92

Ahitayu: M = 28.31, SD = 38.68

Dukhayu: M = 14.95, SD = 27.74

Observation: Different sectors showing different patterns but differences relatively modest. Automobile having highest Hitayu (40.44), Insurance having highest Sukhayu (23.83). But overall patterns similar across sectors.

Designation Wise Ayu Wellbeing Perception

Entry Level Employees (n=450):

Hitayu: $M = 29.15$, $SD = 35.99$

Sukhayu: $M = 15.33$, $SD = 25.89$

Ahitayu: $M = 26.58$, $SD = 35.94$

Dukhayu: $M = 12.13$, $SD = 24.95$

Middle Level Employees ($n=450$):

Hitayu: $M = 42.09$, $SD = 36.98$

Sukhayu: $M = 21.63$, $SD = 30.29$

Ahitayu: $M = 26.55$, $SD = 31.41$

Dukhayu: $M = 22.17$, $SD = 30.69$

Top Level Employees ($n=450$):

Hitayu: $M = 37.79$, $SD = 39.04$

Sukhayu: $M = 22.86$, $SD = 31.89$

Ahitayu: $M = 28.76$, $SD = 36.52$

Dukhayu: $M = 20.49$, $SD = 30.97$

Key Observation: VERY LARGE differences between designation levels, particularly for Entry Level!

Entry Level Hitayu (29.15) much lower than Middle Level (42.09) - difference of 12.94 points

Entry Level Sukhayu (15.33) much lower than Middle Level (21.63) and Top Level (22.86)

Entry Level Dukhayu (12.13) LOWER than Middle (22.17) and Top Level (20.49) - even though they should perceiving more suffering!

Sector Wise ANOVA Results

Hypothesis Test for H1

Null Hypothesis (H_0): Different sectors showing NO significant differences in Ayu wellbeing perception.

Alternative Hypothesis (H_1): Different sectors showing significant differences in Ayu wellbeing perception.

ANOVA Results

Ayu Category	F-Value	P-Value	Interpretation
Hitayu	1.79	0.1288	Not significant
Sukhayu	2.17	0.0709	Not significant

Ahitayu	1.63	0.1645	Not significant
Dukhayu	1.61	0.1706	Not significant

Not Significant (all $p > 0.05$)

Conclusion for Sector Analysis

We FAILING TO REJECT null hypothesis (H_0).

All p-values greater than 0.05, meaning different sectors (Automobile, Banking, FMCG, Insurance, NBFC) NOT showing statistically significant differences in Ayu wellbeing perception for any of the four categories.

Finding: Employee Ayu wellbeing perception is SIMILAR across all sectors studied. The sector/industry type NOT being significant factor in determining employee wellbeing.

Designation-Wise ANOVA Results

Hypothesis Test for H_2

Null Hypothesis (H_0): Different designation levels showing NO significant differences in Ayu wellbeing perception.

Alternative Hypothesis (H_2): Different designation levels showing significant differences in Ayu wellbeing perception.

ANOVA Results

Ayu Category	F-Value	P-Value	Interpretation
Hitayu	10.66	0.000026	Highly Significant
Sukhayu	5.28	0.005251	Significant
Ahitayu	0.38	0.684343	Not Significant
Dukhayu	8.55	0.000214	Highly Significant

Highly Significant ($p < 0.001$), Significant ($p < 0.01$), Not Significant ($p > 0.05$)

Conclusion for Designation Analysis

We REJECTING null hypothesis (H_0) for three categories.

Designation level showing HIGHLY SIGNIFICANT impact on employee Ayu wellbeing perception:

- Hitayu: Highly significant ($F=10.66$, $p<0.001$)
- Sukhayu: Significant ($F=5.28$, $p=0.005$)
- Dukhayu: Highly significant ($F=8.55$, $p<0.001$)
- Ahitayu: No significant difference ($F=0.38$, $p=0.684$)

Finding: Designation level is CRITICAL factor determining employee Ayu wellbeing perception. Entry Level employees having fundamentally different experience than senior levels.

5.4 Post-Hoc Analysis: Tukey HSD Tests

After ANOVA showing significant results, we conducting Tukey HSD to identify which specific groups different.

5.4.1 Hitayu (Wholesome/Beneficial Aspects) Post-Hoc Results

Comparison	P-Value	Mean Difference
Entry vs Middle	0.000019	-12.94
Entry vs Top	0.008076	-8.64
Middle vs Top	0.298652	+4.30

Key Finding: Entry Level employees perceiving SIGNIFICANTLY LOWER Hitayu (beneficial/wholesome aspects):

- 12.94 points lower than Middle Level ($p < 0.001$)
- 8.64 points lower than Top Level ($p = 0.008$)
- Middle and Top Level NOT significantly different

Interpretation: Entry Level employees NOT perceiving work as beneficial or wholesome for their growth and development. They not seeing career advancement, learning opportunities, or meaningful development.

5.4.2 Sukhayu (Pleasant/Satisfactory Aspects) Post-Hoc Results

Comparison	P-Value	Mean Difference
Entry vs Middle	0.037050	-6.30
Entry vs Top	0.007697	-7.53
Middle vs Top	0.889300	+1.23

Key Finding: Entry Level employees perceiving SIGNIFICANTLY LOWER Sukhayu (pleasant/satisfactory aspects):

6.30 points lower than Middle Level ($p = 0.037$)

7.53 points lower than Top Level ($p = 0.008$)

Middle and Top Level NOT significantly different

Interpretation: Entry Level experiencing less pleasant and satisfactory work environment. They not feeling comfortable, appreciated, or part of supportive team.

Ahitayu (Harmful/Unwholesome Aspects) Post-Hoc Results

ANOVA showing NO significant difference ($p = 0.684$)

All designation levels perceiving similar levels of harmful/unwholesome aspects:

Entry Level: M = 26.58

Middle Level: M = 26.55

Top Level: M = 28.76

Key Finding: Office politics, discrimination, corruption, unfair treatment - these harmful aspects affecting ALL levels EQUALLY.

Interpretation: Harmful aspects NOT entry-level specific problem. These being COMPANY-WIDE problems affecting all employees regardless of designation.

Dukhayu (Painful/Suffering Aspects) Post-Hoc Results

Comparison	P-Value	Mean Difference
Entry vs Middle	0.000397	-10.04
Entry vs Top	0.004146	-8.36
Middle vs Top	0.804171	+1.68

Key Finding: Entry Level employees perceiving SIGNIFICANTLY LOWER Dukhayu (suffering/pain):

10.04 points lower than Middle Level ($p < 0.001$)

8.36 points lower than Top Level ($p = 0.004$)

Middle and Top Level NOT significantly different

This being PARADOXICAL and CONCERNING finding:

Entry Level employees should perceiving MORE suffering/pain (they having lowest satisfaction and lowest beneficial perception). But they perceiving LESS suffering.

Why this happening?

Entry Level NOT recognizing their own suffering

Normalizing pain as “this is how entry level supposed to be”

Lack of baseline for comparison

Fear of speaking up about suffering

Young employees not knowing what healthy workplace feeling like

Recommendations:

Comprehensive Entry Level Development Program

Sector Specific Wellbeing Interventions

Role Based Support Mechanisms

Incorporation of Contextual Analysis Models

Conclusion:

This research successfully integrating ancient Ayurvedic Ayu typology framework with modern HR analysis. Using 1,350 employee reviews from 15 major Indian companies across 5 sectors and 3 designation levels, we examining employee wellbeing through four Ayu dimensions: Hitayu (wholesome/beneficial), Sukhayu (pleasant/satisfactory), Ahitayu (harmful/unwholesome), Dukhayu (painful/suffering).

Sector NOT Significant: All sectors showing similar employee Ayu wellbeing patterns. Industry type NOT being major determinant of employee experience.

Designation HIGHLY Significant: Designation level showing MAJOR impact on Ayu wellbeing perception. Highly significant differences found in three dimensions (Hitayu, Sukhayu, Dukhayu).

Entry Level Crisis: Entry Level employees having significantly lower beneficial perception (Hitayu), lower satisfaction perception (Sukhayu), and paradoxically lower suffering recognition (Dukhayu).

Universal Harmful Aspects: All levels perceiving similar harmful aspects (office politics, discrimination). These being company-wide problems, not entry-level specific.

Middle and Top Level Similar: Senior levels showing comparable Ayu wellbeing perception, indicating that seniority benefits become comparable after reaching Middle Level.

Methodological Innovation: Using Ayurvedic framework being novel approach for employee wellbeing analysis in modern HR context. More comprehensive than traditional Western frameworks.

Cultural Integration: Research demonstrating how ancient Indian wisdom can inform modern management practices. Creating bridge between traditional knowledge and contemporary HR.

Practical Application: Findings providing clear direction for organizational improvement - particularly highlighting Entry Level crisis needing urgent attention.

Theoretical Contribution: Framework showing that employee wellbeing being multidimensional, not binary. Presence of beneficial aspects AND presence of suffering both important.

References:

1. <https://www.ambitionbox.com/reviews>
2. <https://www.glassdoor.co.in/Reviews/index.htm>
3. Mutinda, J., Mwangi, W., & Okeyo, G. (2023). Sentiment analysis of text reviews using lexicon-enhanced BERT embedding (LeBERT) model with convolutional neural network. *Applied Sciences*, 13(3), 1445. <https://doi.org/10.3390/app13031445>

4. Li, B., Liu, X., & Zhang, R. (2024). *Employing the BERT model for sentiment analysis of online commentary*. *Applied and Computational Engineering*, 32, 241–247.
- 5.. Zhang, H., Chen, J., & Xu, Y. (2023). *Fine-tuning BERT for employee sentiment analysis on Glassdoor reviews*. *Journal of Computational Social Science*, 6(1), 87–104.
<https://doi.org/10.1007/s42001-022-00189-9>
6. Charaka Samhita. (Translated by Sharma, P. V., 1998). “Charaka Samhita - Text with English Translation.” Chaukhambha Orientalia Publishers