

# **“360-DEGREE FEEDBACK SOFTWARE FOR THE GOVERNMENT PRESS INFORMATION BUREAU (PIB) USING ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING”**

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## **Keywords:**

AI-driven feedback system, Web scraping, Sentiment analysis, Real-time media monitoring, Crisis management, Government communication, Machine learning, Departmental feedback.

## **Introduction:**

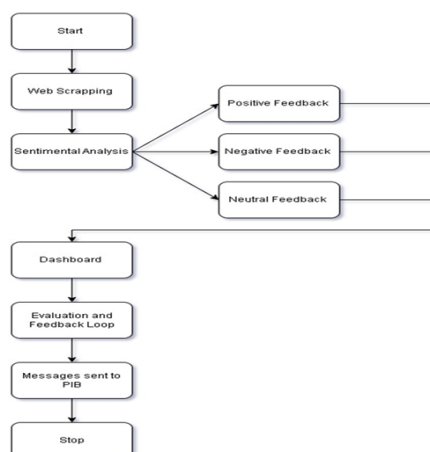
Introducing a cutting-edge 360-degree feedback program designed especially for the Indian government, which attracted notice in local media for combining machine learning and artificial intelligence. This innovative idea has generated a lot of interest and coverage in local news channels with the goal of revolutionizing performance assessments within government organizations. To provide effective and timely feedback to the Government, an automated feedback system using Artificial Intelligence and Machine Learning is required. The absence of an AI-driven feedback system for evaluating government-related news in regional languages presents a substantial challenge. The software should categorize the stories into the concerned departments as per the tags provided. The stories should be categorized as favourable (positive), neutral, or not favourable (negative) to the Government of India. Negative stories pertaining to a department should be notified to the concerned PIB officer on a real-time basis by E-mail, SMS, or Android notification or by other means. The clippings should be classified into Departments and tonality (positive, negative, and neutral). If the story is negative, the concerned PIB officer should get the notification immediately. The software adapts the feedback process to the dynamics of the Indian governmental context by utilizing AI and ML capabilities. It makes a thorough review system possible by combining the perspectives of various stakeholders and using cutting-edge algorithms to extract intelligence that can be use. Such a system is essential for effective monitoring in today's markets and sectors, enabling governments to proactively manage public opinion, address problems, and improve communication methods.

## Objectives:

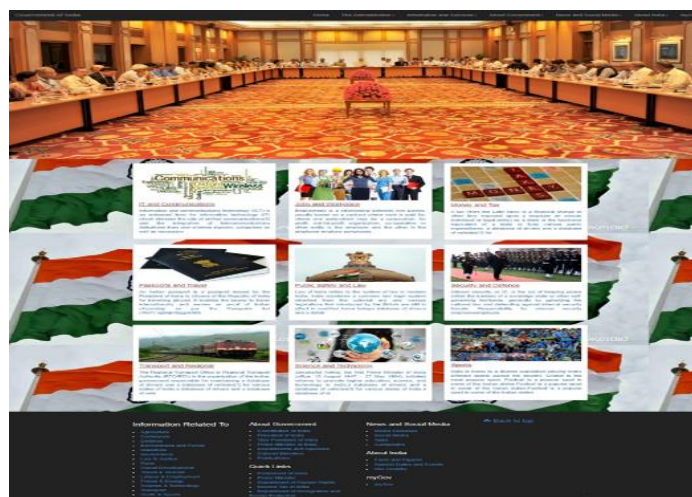
- **Enhanced Governance:** Implement a user-friendly interface for government officials to provide feedback on various aspects of governance.
- **Optimized Workforce Performance:** Design with assessment criteria covering key performance indicators (KPIs) relevant to different roles within the government.
- **Data-Driven Decision Making:** Implement robust data analytics capabilities to analyse feedback data and extract meaningful patterns and trends.
- **Promote Continuous Improvement:** Establish mechanisms for regular feedback collection and analysis, including periodic surveys, peer evaluations, and performance reviews.

## Methodology:

This comprehensive methodology employs AI and ML to create a robust 360-degree feedback system for PIB. By integrating sentiment analysis, an interactive dashboard, and continuous feedback mechanisms, the software ensures real-time insights, proactive crisis management, and informed decision-making in the realm of media monitoring and communication strategy for the government.

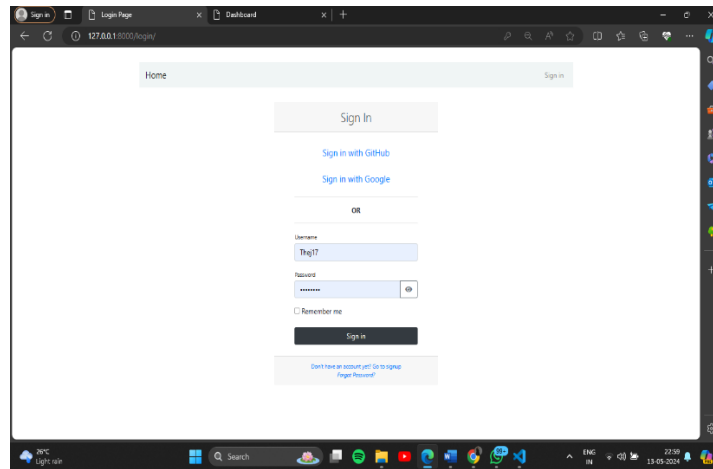


## Results and Conclusions:



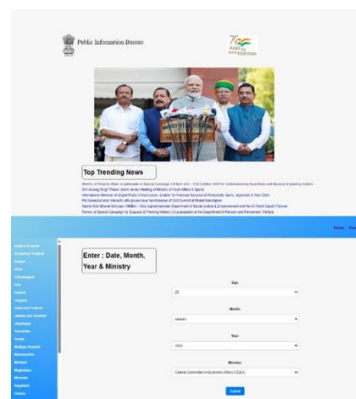
**Figure 1: Home Page**

The Results consists of a home page in Figure 1 having Feedback System for Governance in India.



**Figure 2: Login Page**

In Figure 2 we can see the secure login for PIB officers with unique credentials to access the governance feedback system.



**Figure 3: Dashboard page**

In Figure 3 The dashboard features intuitive controls for selecting the date, month, and year, ensuring accurate record-keeping and analysis over time.

```
PS C:\Users\Vip\Desktop\MAJOR PROJECT\360_Degree_Feedback_Software> cd .\users\  
PS C:\Users\Vip\Desktop\MAJOR PROJECT\360_Degree_Feedback_Software\users> cd .\sentimental_analysis\  
PS C:\Users\Vip\Desktop\MAJOR PROJECT\360_Degree_Feedback_Software\users\sentimental_analysis> python.exe  
Index(['Sentence', 'status'], dtype='object')  
Confusion Matrix:  
          Predicted Neutral  Predicted Positive  Predicted Negative  
Class Neutral             13              18              21  
Class positive           446             417             452  
Class negative           223             214             209  
Accuracy for positive: 0.75  
Accuracy for neutral: 0.8171182661596958  
Accuracy for negative: 0.8235294117647058  
PS C:\Users\Vip\Desktop\MAJOR PROJECT\360_Degree_Feedback_Software\users\sentimental_analysis> |
```

**Figure 4: Sentimental Analysis**

In Figure 4 Our sentiment analysis algorithms accurately classify feedback into three categories: Positive, Negative, and Neutral.

In concluding the proposed AI-driven feedback system, it becomes evident that the amalgamation of real-time media monitoring, advanced sentiment analysis, and crisis management notification alerts is a transformative leap for effective governance in the Indian

context. This holistic system is poised to redefine the government's approach to communication, decision-making, and crisis response.

### **What is the innovation in the project?**

This project consists of a feedback system for the government Press Information Bureau (PIB) which gives clear-cut feedback from the public for the policies implemented by government and the feedback will be in three forms that is Positive, Negative and Neutral Feedback.

### **Scope for Future Work:**

Driven The scope of this project encompasses developing a 360-degree feedback software tailored for the Government Press Information Bureau (PIB) that incorporates artificial intelligence (AI) and machine learning (ML) capabilities. This software will facilitate comprehensive feedback collection from supervisors, peers, subordinates, and external stakeholders, employing AI algorithms for data analysis. Features include personalized performance analytics dashboards, AI-driven recommendations for professional development, seamless integration with existing systems, and robust privacy measures. The project aims to develop a 360-degree feedback software for the Government Press Information Bureau (PIB), integrating AI and ML. It will enable comprehensive feedback collection, personalized analytics, and seamless integration, fostering a culture of continuous improvement and organizational effectiveness through data-driven insights and actionable recommendations for professional development. The software aims to foster a culture of continuous improvement within the PIB by providing actionable insights to employees and enhancing organizational effectiveness through data-driven decision-making.