



Basic Details of the Team and Problem Statement

Ministry/Organization Name/Student Innovation:

Ministry of Information and Broadcasting

PS Code: SIH1329

Problem Statement Title: 360-degree feedback software for the Government of India related News Stories in Regional Media using Artificial Intelligence / Machine Learning

Team Name: Code Crusaders

Team Leader Name: Kajal Choudhary

Institute Code (AISHE): U-0643

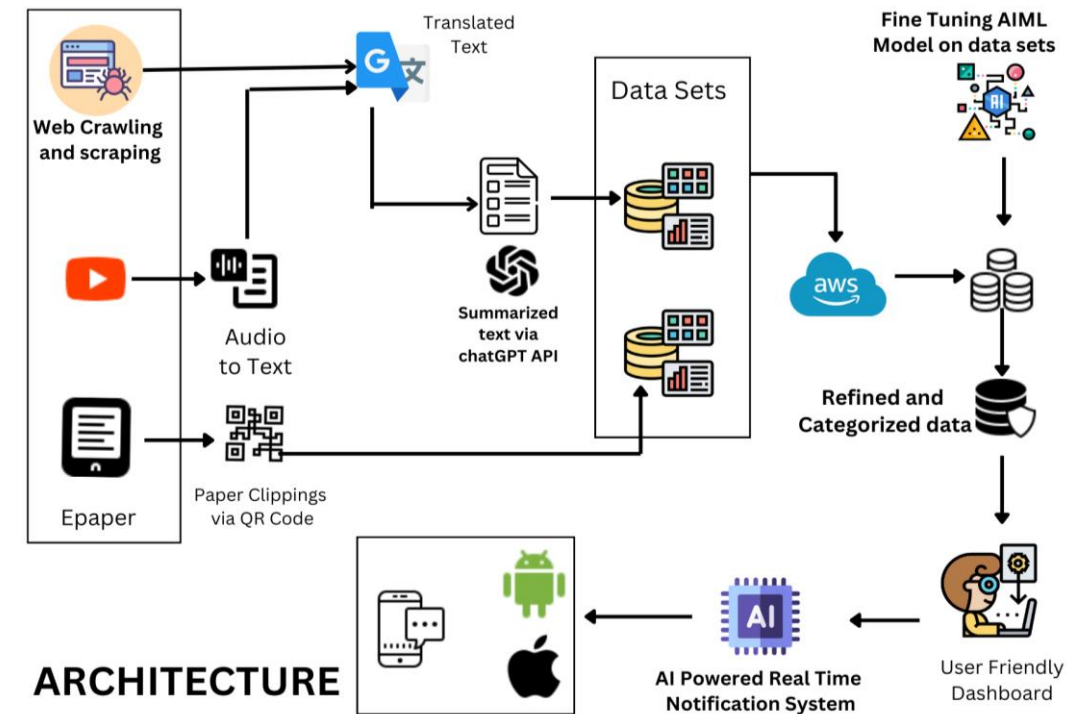
Institute Name: Galgotias University

Theme Name: Smart Automation

Idea/Approach Details

Idea/Solution/Prototype:

- ❖ Developing an **AI/ML**-powered automated feedback system.
- ❖ Leveraging **Natural Language Processing(NLP)** frameworks to handle diverse Indian Languages for **web crawling** and **web scraping** the valuable data from regional media websites.
- ❖ Translated and summarized text to make data sets, and **fine-tuned** the data set for categorization by **Sentimental Analysis ML model**.
- ❖ Employing **AI-enhanced OCR** for relevant news clippings & paste them into a pre-designed template with newspaper name, page number, edition, etc.
- ❖ **Web Crawling** selected news YouTube channels, identifying Government of India-related portions using **closed captioning** or **audio-to-text conversion**, then running the **Sentimental Analysis ML model** on the translated text **data set**.
- ❖ Notifying concerned PIB officers using **Artificial Intelligence real-time notification system** via SMS or Android notifications, for negative stories.
- ❖ Developing an **intuitive** and **user-friendly dashboard** for easy data sorting and filtering based on variables like tonality, edition, department, etc.



Technology stack:

- **Web Crawling and Data Collection:** Python, Scrapy, BeautifulSoup/ Selenium
- **Language Processing and Sentimental Analysis:** NLTK, spaCy, Scikit-learn, TensorFlow, BERT / GPT-3
- **Notification:** Twilio/ Nexmo/Plivo and Firebase Cloud Messaging (FCM)
- **Data Storage and Management:** MySQL/ PostgreSQL/ MongoDB and AWS Cloud
- **Front-end Framework:** React and NextJs
- **Back-end Framework:** Express.js, Django/ Flask

Idea/Approach Details

Use Cases

- **Multilingual Sentiment Analysis:** Using AI and ML sentiment analysis on news articles and media content in various Indian languages, to provide insights into public sentiment, helping the government understand public reactions.
- **Real-time Notification System:** A real-time notification system that instantly alerts concerned PIB officers when negative stories are detected in regional media.
- **E-paper Scanning and OCR:** Save time and effort by reducing manual scanning and data entry.
- **Government-Media Relations:** The system can improve government-media relations by providing timely feedback, addressing concerns, and fostering better communication.
- **User Training and Support:** PIB officers can effectively utilize the system for informed decision-making.
- **Impact on Policy and Communications:** The system can influence government policies, communication strategies, and public engagement.

Business Model

- **Collaboration:** Collaborate with the Gov. of India
- **Competition:** No Competition in the market
- **Revenue Streams:** Service-based model.

Dependencies / Show stopper

- **Multilingual Complexity and sentimental analysis accuracy:** Managing content in multiple Indian languages, including translation and achieving high accuracy in sentiment analysis.
- **Scalability:** The system is designed to handle a large volume of data and be scalable to accommodate potential growth in the number of languages and websites.
- **Data Classification:** Efficiently categorizing news stories into relevant departments and tonalities using natural language processing (NLP) techniques.
- **User-Friendly Dashboard:** Designing an intuitive dashboard that allows users to sort, filter, and access relevant information easily.
- **Data Security:** Emphasizing the importance of data security and encryption to protect sensitive government information and user data.

Future Development

- **Mobile Application :** Using Kotlin
- **Integrated Chatbot**
- **Extensive Documentation and Animated Tutorials**

Team Member Details

Team Leader Name: Kajal Choudhary

Branch : Btech

Stream : CSE

Year : III

Team Member 1 Name: Anmol Ranjan

Branch : Btech

Stream : CSE

Year : III

Team Member 2 Name: Satyam Kumar Srivastava

Branch : Btech

Stream : CSE

Year : III

Team Member 3 Name: Rishabh Jaiswal

Branch : Btech

Stream : CS(AIML)

Year : III

Team Member 4 Name: Mohammad Irshad Ali

Branch : Btech

Stream : CSE

Year : III

Team Member 5 Name: Paras Singhal

Branch : Btech

Stream : CS(AIML)

Year : III

Team Mentor 1 Name: Ms. Shweta

Category : Academic

Expertise :

Domain Experience:

Team Mentor 2 Name: Type Your Name Here

Category (Academic/Industry):

Expertise (AI/ML/Blockchain etc):

Domain Experience (in years):