



MANIPAL INSTITUTE  
OF TECHNOLOGY  
MANIPAL  
*A Constituent Institution of Manipal University*



SMART INDIA  
HACKATHON  
2022

# EspressoByte

The logo for EspressoByte, featuring the letters 'Eb' in a stylized, rounded font. The 'E' is orange and the 'b' is teal, matching the colors used in the main text above.



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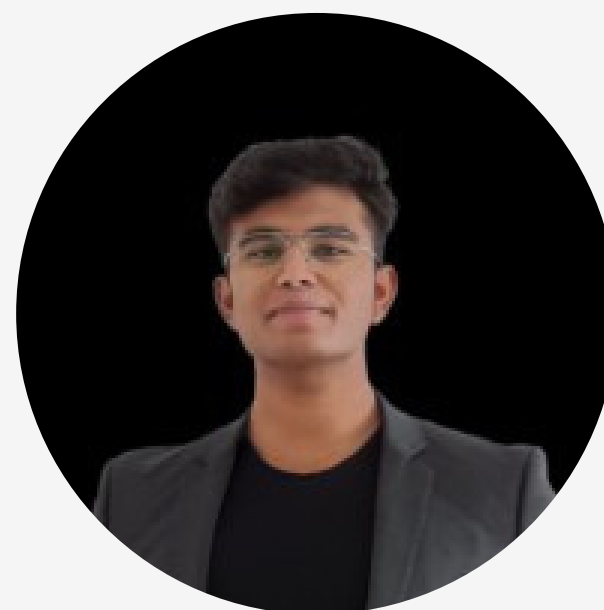
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# MEET THE TEAM



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# MEET THE TEAM



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Sanjana  
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# ABOUT THE TEAM

At EspressoByte, we believe in technological solutions that are built to change the world. The technology we aim to develop hopes to ease the dissemination of important information from authorities to the people.



# THE PROBLEM STATEMENT

## NS1230 :

An AI/ML-based solution that generates short summaries of press releases for easy and more targeted dissemination of information to the people.

Such a TLDR (Too Long, Didn't Read) software may be integrated into an app-based solution.



## Ministry/ Organization Name:

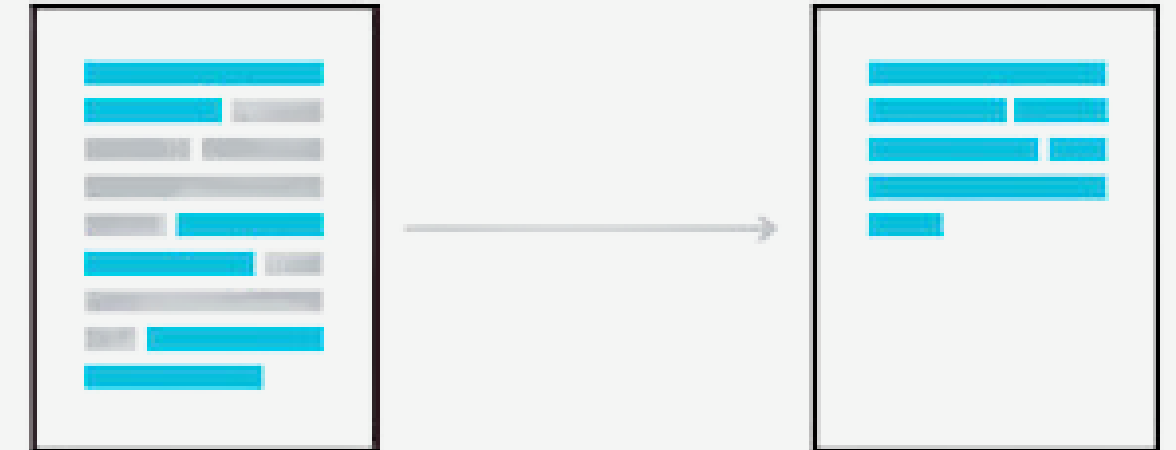
Policy Planning Cell, Ministry of Information & Broadcasting

# THE PURPOSE

Research shows that people's attention spans are decreasing, with many people losing interest in reading long articles.

Despite the fact that press releases contain important information, few people read them these days.

We feel that a TLDR tool that summarizes the information circulated by the Government of India is the need of the hour.





# IDEA SYNOPSIS

**A Chrome Extension to provide summarized press releases to the public:**

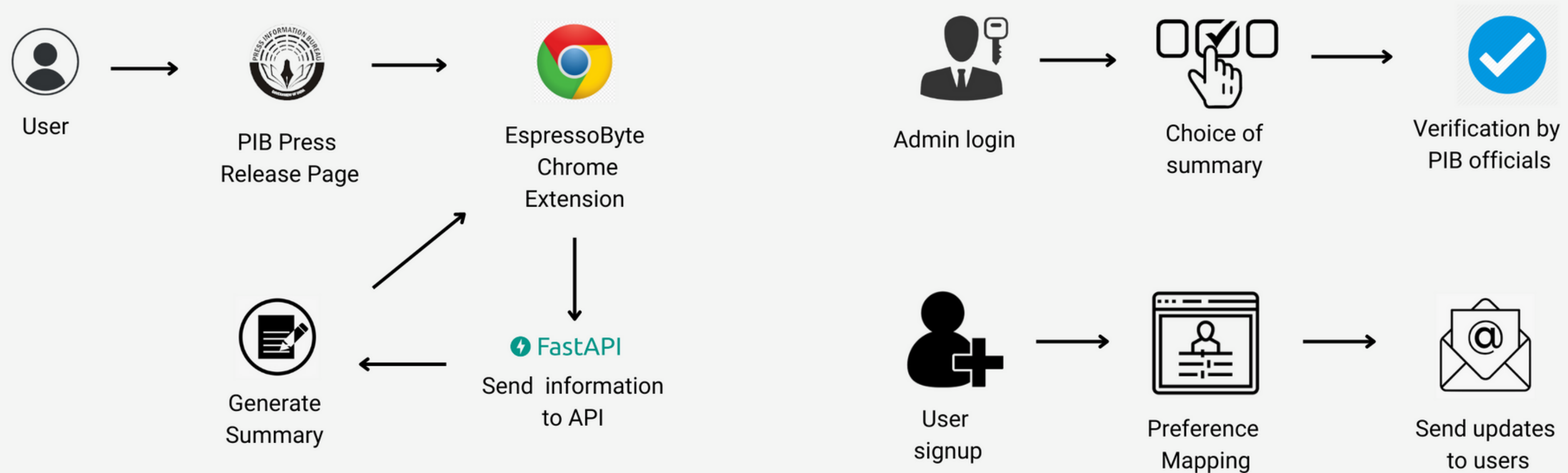
The EspressoByte extension summarizes news articles and press releases based on selected text.

The summaries can be viewed in most regional languages of India.

The summaries are verified by PIB Officials.



# WORK FLOWCHART



# TECHNOLOGY STACK

## Machine Learning:

- Python
- Tensorflow, Keras
- FastAPI, Heroku

## Web Development:

- ReactJS, NodeJS
- HTML, CSS
- Manifest

## Commercialization:

- Toolio API
- AWS
- MongoDB

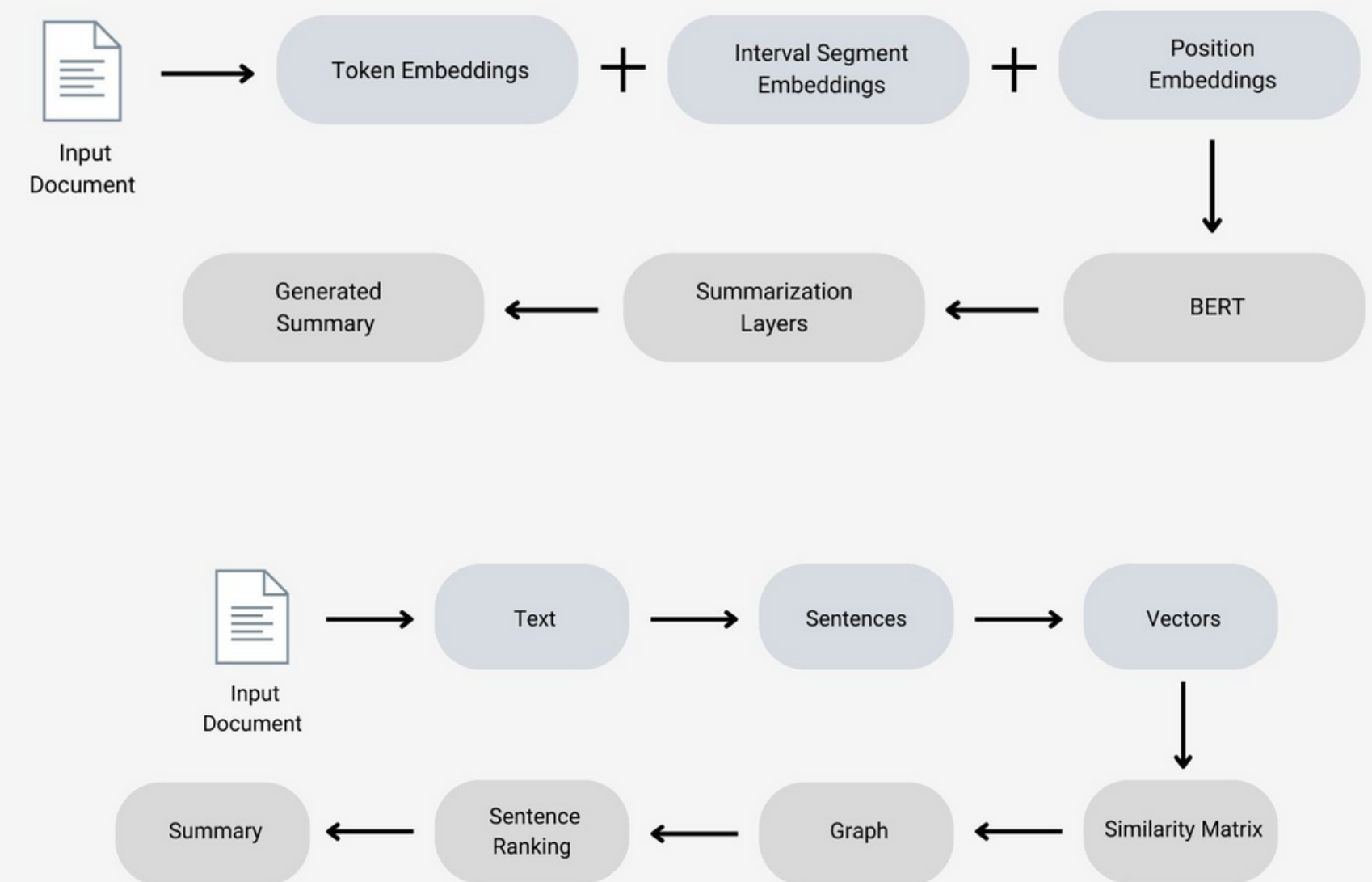


# ML MODEL

**We have implemented 3 models for text summarization:**

Extractive Model, Pegasus, and BART.  
While training, these models are evaluated using metrics like Rouge and Bleu.

Uses FastAPI for integration and deployment on the cloud.



# API

There are multiple API calls for sending SMS, E-Mail, and WhatsApp messages to users who have signed up. The APIs have also been created for text-to-video and speech translation.





# FRONTEND

EspressoByte

An admin portal for PIB Officials to verify the summaries generated by ML Models.

A portal for users to choose their ministry preferences and receive updates regarding press releases.

A Chrome Extension that summarizes selected text and allows translation into the preferred language.

ఈరోజు, 'హర్ ఘర్ తిరంగ్' ప్రచారాన్ని విజయవంతం చేసినందుకు పంజాబ్ ప్రజలకు, ముఖ్యంగా పంజాబ్ యువతకు నేను ధన్యవాదాలు తెలియజేస్తున్నాను. నేటి కార్యక్రమం కూడా దేశంలోని ఆరోగ్య సేవలను మెరుగుపరుస్తుంది.

Summarize

Telugu

Sign In

Ministry

All Ministry

Email Address

Enter email

Password

Enter password

Submit

[Forgot Password?](#)

## Latest Releases

India's Cumulative COVID-19 Vaccination Coverage exceeds 209.67 Cr  
authored by Ministry of health and Family Welfare

COVID-19 vaccination for the age group 12-14 years was started on 16 March, 2022. So far, more than 3.99 Cr (3,99,63,095) adolescents have been administered with the first dose of COVID-19 vaccine. Similarly, the COVID-19 precaution dose administration for age group 18-59 years also started from 10th April, 2022 onwards.

Approved

Update on COVID-19 Vaccine Availability in States/UTs  
authored by Ministry of health and Family Welfare

The Union Government is committed to accelerating the pace and expanding the scope of COVID-19 vaccination throughout the country. The nationwide COVID 19 vaccination started on 16th January 2021. The new phase of universalization of COVID-19 vaccination commenced from 21st June 2021. The vaccination drive has been

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COVID-19 UPDATE  
authored by Ministry of health and Family Welfare  
As part of the nationwide vaccination drive, Government of India has been supporting the States and UTs by providing them COVID Vaccines free of cost. In the new phase of the universalization of the COVID19 vaccination drive, the Union Government will procure and supply (free of cost) 75% of the vaccines being produced by the vaccine manufacturers in the country to States and UTs.

Approved

# COMMERCIALIZATION

The commercial application of our product is to send SMSs, WhatsApp messages, and E-mails to our subscribers based on their preferences. The customers will receive updates as per their chosen frequency.



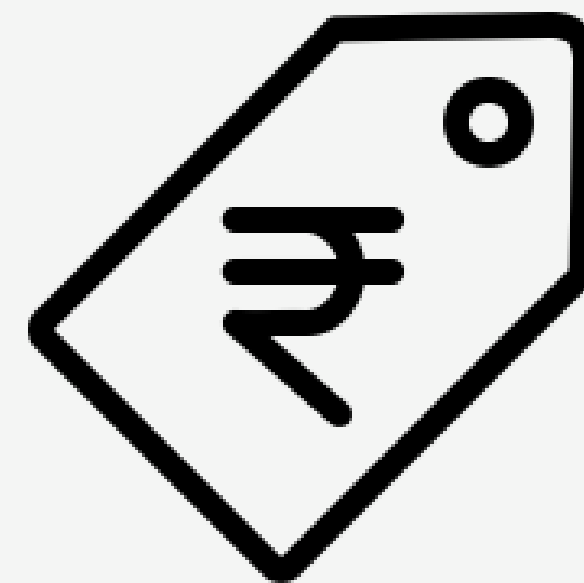


# OVERHEADS

The cost of large-scaling of the product is momentous due to high demand.

The high time complexity for a large number of users.

Increased costs due to deploying the model on a paid cloud service.



# FUTURE SCOPE

Use customer segmentation and demographic clustering to send targeted content to users and subscribers.  
Deploy our product on a larger cloud platform like AWS.  
Send periodic updates to Ministry officials regarding product usage.







# Thank You