**Documentation – News Summarizer TTS Web App**

**1) Project Setup:**  
How to run this project on your local machine:  
  
  
Go to Command prompt/PowerShell and run the following

Clone the repository

git clone https://github.com/vibezy-6/News-Summarizer-Hindi-TTS.git

cd News-Summarizer-Hindi-TTS

# (Optional) Create a virtual environment

python -m venv venv

source venv/bin/activate # or venv\Scripts\activate on Windows

# Install dependencies

pip install -r requirements.txt

# Run the Streamlit app

streamlit run streamlit\_app.py

**2) Model & Tool Details**

* **Summarization**: Custom sentence extraction logic using BeautifulSoup and manual truncation (no external summarization model).
* **Sentiment Analysis**: NLTK’s SentimentIntensityAnalyzer (VADER).
* **Topic Extraction**: Simple keyword filtering logic from summaries.
* **Translation**: deep-translator (Google Translate backend).
* **TTS**: gTTS (Google Text-to-Speech).

**3) API Usage & Access**

* **Backend API**: Located in api.py
* **Streamlit Interface**: Acts as the primary frontend and backend integration point.
* **Usage Flow**:
  1. User enters a company name.
  2. News summaries are fetched via Bing.
  3. Sentiment and topic analysis performed.
  4. Hindi translation + audio generated using deep-translator + gTTS.

**4) Third-party APIs & Libraries Used**

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| **Tool/Service** | **Purpose** |
| Bing Search | News & web scraping source |
| NLTK (VADER) | Sentiment analysis |
| gTTS | Hindi audio generation |
| deep-translator | Hindi text translation |
| Streamlit | Web UI |
| BeautifulSoup4 | HTML parsing |

**5) Assumptions & Limitations**

* Google TTS and Translation APIs may rate-limit (handle with retry in production).
* News quality depends on search engine accuracy and availability.
* Currently supports only **Hindi** for translation and speech.