📰 News Sentiment Analyzer

This is a News Sentiment Analysis and Text-to-Speech (TTS) App built using Flask, Streamlit,and Hugging Face Spaces. The application extracts news, analyzes sentiment, and converts text into speech.

🚀 Features

* Fetches latest news from **Google News**
* Performs sentiment analysis using **TextBlob**
* Converts text to speech using **gTTS**
* Provides a simple UI using **Streamlit**
* Deployed on **Hugging Face Spaces**

📌 Installation & Setup

**1️. Clone the Repository**

git clone https://github.com/vibhasingh99/news-sentiment-app.git

cd news-sentiment-app

**2️. Create a Virtual Environment**

python -m venv venv

source venv/bin/activate # Mac/Linux

venv\Scripts\activate # Windows

**3️. Install Dependencies**

pip install -r requirements.txt

**4️. Run Flask Backend**

python backend.py

Flask will run at: [**http://127.0.0.1:5000/**](http://127.0.0.1:5000/)

**5️. Run Streamlit Frontend**

streamlit run app.py

Streamlit will open in the browser.

📡 API Endpoints

**1️. Check if Backend is Running**

GET /

🔹 **Response:**

{"message": "Flask backend is running!"}

**2️. Perform Sentiment Analysis**

POST /analyze\_sentiment

🔹 **Body (JSON):**

{"text": "This product is amazing!"}

🔹 **Response:**

{"sentiment": "Positive", "text": "This product is amazing!"}

**3️. Convert Text to Speech**

POST /text-to-speech

🔹 **Body (JSON):**

{"text": "Hello, welcome to my app!"}

🔹 **Response:** MP3 file will be generated and sent as a download.

🎤 Deployment on Hugging Face Spaces

1️. Create a Hugging Face Space

2️. Upload app.py, backend.py, requirements.txt

3️. Restart Space from Settings

4️. Test API & Frontend

**Live App:** [https://huggingface.co/vibha08]

📌 Next Steps

* Improve sentiment analysis with a more powerful ML model
* Enhance UI with better design
* Deploy on cloud platforms like AWS/GCP

🛠 Tech Stack

* **Python**
* **Flask** (Backend API)
* **Streamlit** (Frontend UI)
* **TextBlob** (Sentiment Analysis)
* **gTTS** (Text-to-Speech)
* **BeautifulSoup** (Web Scraping)
* **Hugging Face Spaces** (Deployment)

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🔗 **GitHub:** [https://github.com/vibhasingh99/news-sentiment-app]  
🔗 **Hugging Face Space:** [https://huggingface.co/vibha08]