

Report

AI News Anchor

1. Project Overview

This project is an **AI-powered virtual news anchor** that fetches the latest news articles in real time, summarizes them, and generates a video of a talking anchor delivering the updates. It integrates **NewsAPI** for fetching trending news and **D-ID API** for creating a video with speech synthesis. The system is built using **Python and Streamlit** for interactivity.

2. Objectives

- Automate the process of **fetching and summarizing news**.
- Generate a **realistic video anchor** delivering the news.
- Provide **user customization** (anchor image, voice selection, number of news items).
- Demonstrate the application of **generative AI in digital journalism**.

3. System Requirements

Software Requirements

- Python 3.8+
- Streamlit
- Requests, dotenv, OpenAI, LangChain
- APIs: NewsAPI, D-ID API

Hardware Requirements

- System with minimum 4GB RAM
- Stable internet connection

4. System Design

Architecture

1. **User Input** – Image URL, news topic, number of articles, voice choice.
2. **News Fetching** – news_api.py retrieves trending news using NewsAPI.
3. **Script Generation** – Extracts descriptions and composes a news script.
4. **Video Generation** – news_video.py sends script + image + voice to D-ID API.
5. **Output** – A generated video of the AI anchor delivering the news.

5. Implementation

Modules

- **streamlit_app.py** – Main UI for interaction.
- **news_api.py** – Fetches and processes news articles.
- **news_video.py** – Handles video creation with D-ID API.
- **requirements.txt** – Python dependencies.

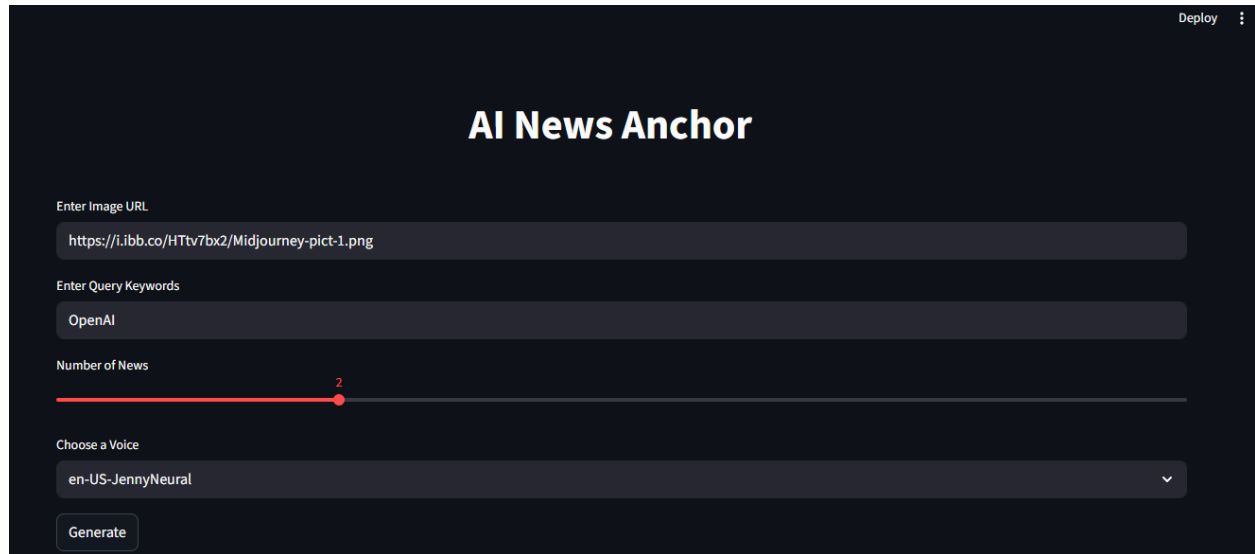
Workflow

1. Start the Streamlit app with streamlit run streamlit_app.py.
2. Enter inputs (image URL, query, number of news items, voice).
3. System fetches & summarizes news.
4. A news video anchor is generated and displayed.

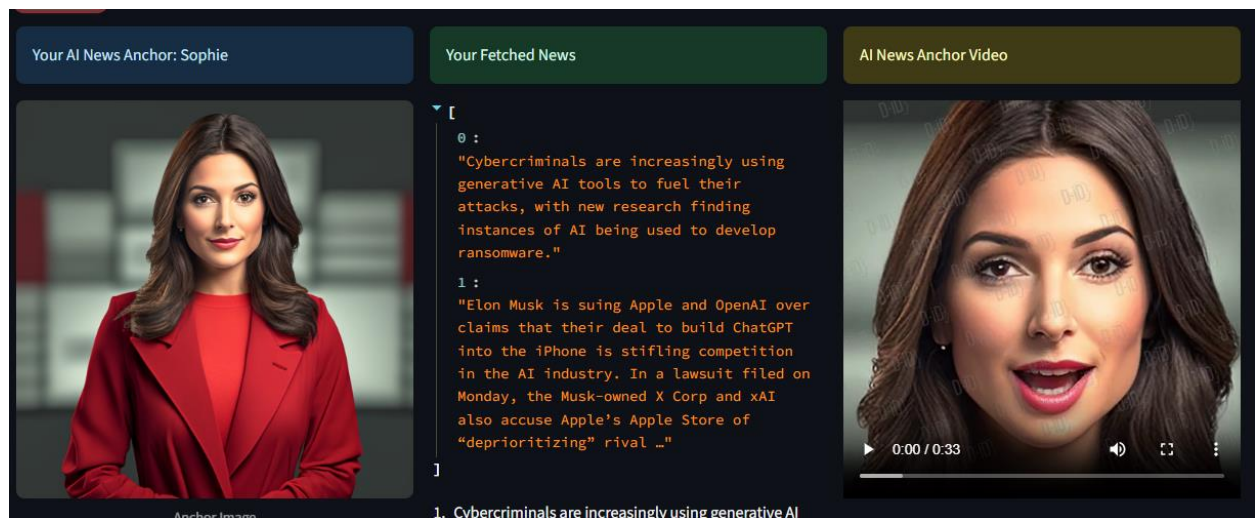
6. Results

- Successfully integrates **NewsAPI** and **D-ID API**.
- Generates realistic **AI anchor videos** based on chosen topics.
- Supports multiple voices and image customization.
- Provides real-time, personalized news delivery.

7. Screenshots



The screenshot shows the 'AI News Anchor' web application interface. At the top right is a 'Deploy' button with a settings icon. The main title 'AI News Anchor' is centered. Below it are four input fields: 'Enter Image URL' with the value 'https://i.ibb.co/HTtv7bx2/Midjourney-pict-1.png', 'Enter Query Keywords' with the value 'OpenAI', 'Number of News' with a slider set to 2, and 'Choose a Voice' with a dropdown menu showing 'en-US-JennyNeural'. A 'Generate' button is at the bottom left.



The screenshot shows the output of the AI News Anchor application, divided into three panels. The left panel, titled 'Your AI News Anchor: Sophie', displays a portrait of a woman with long brown hair wearing a red blazer, labeled 'Anchor Image'. The middle panel, titled 'Your Fetched News', shows a JSON array of two news items. The first item is about cybercriminals using generative AI, and the second is about Elon Musk suing Apple and OpenAI. The right panel, titled 'AI News Anchor Video', shows a video player with the same woman's face, labeled 'AI News Anchor Video'.

```
[{"0": "Cybercriminals are increasingly using generative AI tools to fuel their attacks, with new research finding instances of AI being used to develop ransomware.", "1": "Elon Musk is suing Apple and OpenAI over claims that their deal to build ChatGPT into the iPhone is stifling competition in the AI industry. In a lawsuit filed on Monday, the Musk-owned X Corp and xAI also accuse Apple's Apple Store of \"deprioritizing\" rival ..."}]
```

1. Cybercriminals are increasingly using generative AI

8. Applications

- **Digital Journalism** – Automated anchors for online platforms.
- **Corporate Newsrooms** – Quick updates for employees.
- **Education** – News summaries in classrooms.
- **Entertainment** – Personalized daily news bulletins.

9. Limitations

- Dependent on API quotas (NewsAPI, D-ID).
- Longer scripts may cause timeouts in video generation.
- Requires stable internet for smooth functioning.

10. Future Scope

- Support for **multi-language anchors**.
- Integration of **real-time video avatars**.
- Adding **summarization with LLMs (like GPT)** for cleaner scripts.
- Scheduling daily automated news bulletins.

11. Conclusion

The AI News Anchor demonstrates how **generative AI** can transform journalism by automating news delivery. It combines **real-time information retrieval** with **synthetic media generation** to create a scalable, customizable, and engaging solution for digital news.