AI Video Generation Tool – Report

(https://github.com/rahulogoel/AI-News-Video-Generator)

Objective

Create an AI based application or tool which generates videos while scrapping trending news articles.

Tools & Technologies Used

- NewsApi = For scraping trending news articles
- Google Gemini = For generating short voiceover-style scripts
- Python = For scripting and automating the pipeline
- Lumen5 = Free AI video tools to turn scripts into engaging videos

Pipeline Overview

1) Trending News Collection
   - Used to fetch top trending headlines from the website worldwide.
   - Fetched articles at the beginning to demonstrate the pipeline using the NewsApi from https://newsapi.org/ website which provides 100 free requests per day without the premium plan.

2) Script Generation
   - Used Google Gemini 2.0 Flash API to generate a 30-60 second news segment script for each article.
   - Prompts were structured to encourage a professional yet conversational tone.

3. Video Input Preparation
   - Generated .txt files for each article containing the script
   - Suggested image prompts
   - These were used as inputs to Lumen5 to produce videos.

4. Video Creation
   - Uploaded the script and matched suggestions using free Lumen5 GenAI video tool.

- Adjusted the pacing and layout to fit a 60-second format.
- For demo purpose, I generated 2 videos of sizes 16:9 (laptop) and 9:16 (phone).

Generated Videos =
https://github.com/rahulogoel/AI-News-Video-Generator/tree/main/generated_video

Source code - https://github.com/rahulogoel/AI-News-Video-Generator

TODOS / Future Improvements
- Add text-to-speech for narration
- Add Virtual News Anchor for reading news
- Increase video engagement features and accuracy / quality of news
- Fully automate video rendering (using MoviePy or GenAI APIs like RunwayML).