

CS571- Week 11 Homework 2: GenAI - Containerized video transcription and chat app

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https://hc.labnet.sfbu.edu/~henry/sfbu/course/cloud_computing/genai/slide/exercise_kubernetes.html

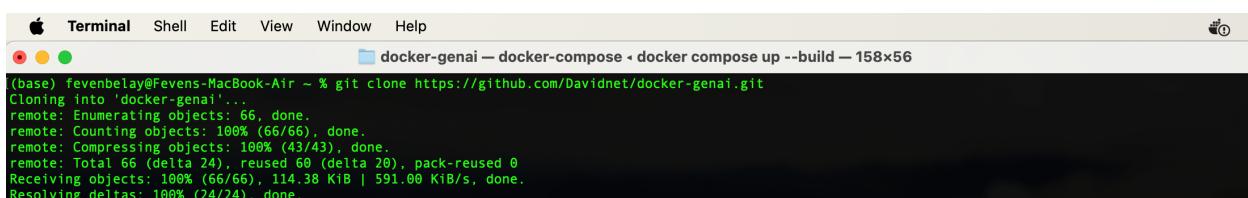
Q6 ==> GenAI - Containerized video transcription and chat app

GenAI - Containerized video transcription and chat app

- Step 1: [GenAI - Containerize your app](#)
- Step 2: [Video transcription and chat](#)
- Step 3: [Update your portfolio](#) and publish your documents on GitHub using this structure
 - Cloud Computing
 - Kubernetes
 - Generative AI

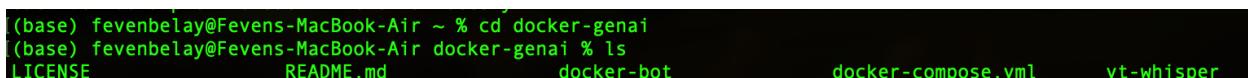
1. In a terminal, run the following command to clone the sample application's repository.

```
$ git clone https://github.com/Davidnet/docker-genai.git
```



```
(base) fevenbelay@Fevens-MacBook-Air ~ % git clone https://github.com/Davidnet/docker-genai.git
Cloning into 'docker-genai'...
remote: Enumerating objects: 66, done.
remote: Counting objects: 100% (66/66), done.
remote: Compressing objects: 100% (43/43), done.
remote: Total 66 (delta 24), reused 60 (delta 20), pack-reused 0
Receiving objects: 100% (66/66), 114.38 KiB | 591.00 KiB/s, done.
Resolving deltas: 100% (24/24), done.
```

2. Go to the docker-genai directory.



```
(base) fevenbelay@Fevens-MacBook-Air ~ % cd docker-genai
(base) fevenbelay@Fevens-MacBook-Air docker-genai % ls
LICENSE           README.md          docker-bot      docker-compose.yml      yt-whisper
```

3. Specify your API keys. In the `docker-genai` directory, create a text file called `.env` and specify your API keys inside



```
(base) fevenbelay@Fevens-MacBook-Air docker-genai % cp .env.example .env
(base) fevenbelay@Fevens-MacBook-Air docker-genai % nano .env
```



```
UW PICO 5.09 File: .env

#-----
# OpenAI
#-----
OPENAI_TOKEN=AIzaSyC8R1JatzWDlcNabKW88fJ5FIPncsMM694 # Replace your-api-key with your personal API key

#-----
# Pinecone
#-----
PINECONE_TOKEN=AIzaSyC8R1JatzWDlcNabKW88fJ5FIPncsMM694 # Replace your-api-key with your personal API key
```

4. Build and run the application. In a terminal, change directory to your `docker-genai` directory and run the following command.

\$ docker compose up --build

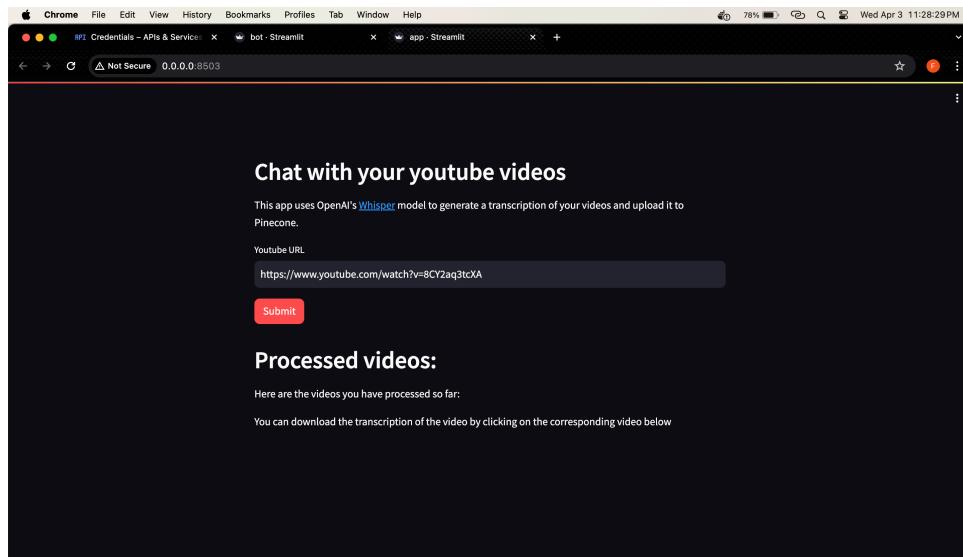
```

--> Running 3/3
[+] Running 3/3
  ✓ Network docker-genai_default      Created
  ✓ Container docker-genai-bot-1      Created
  ✓ Container docker-genai-yt-whisper-1 Created
Attaching to bot-1, yt-whisper-1
yt-whisper-1 |
yt-whisper-1 | Collecting usage statistics. To deactivate, set browser.gatherUsageStats to False.
bot-1 |
bot-1 | Collecting usage statistics. To deactivate, set browser.gatherUsageStats to False.
bot-1 |
yt-whisper-1 |
yt-whisper-1 |
yt-whisper-1 | You can now view your Streamlit app in your browser.
bot-1 |
bot-1 | You can now view your Streamlit app in your browser.
bot-1 |
yt-whisper-1 |
yt-whisper-1 | URL: http://0.0.0.0:8503
yt-whisper-1 |
bot-1 | URL: http://0.0.0.0:8504
bot-1 |
yt-whisper-1 | 2024-04-04 06:21:04.683 Processing video: https://youtube.com/watch?v=yaQZFhrW0fU
yt-whisper-1 | 2024-04-04 06:21:14.045 File size(bytes): 6940500

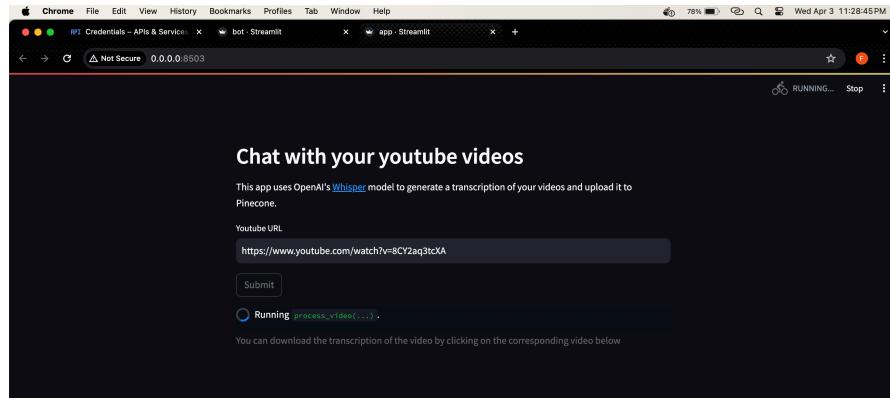
```

Using the yt-whisper service

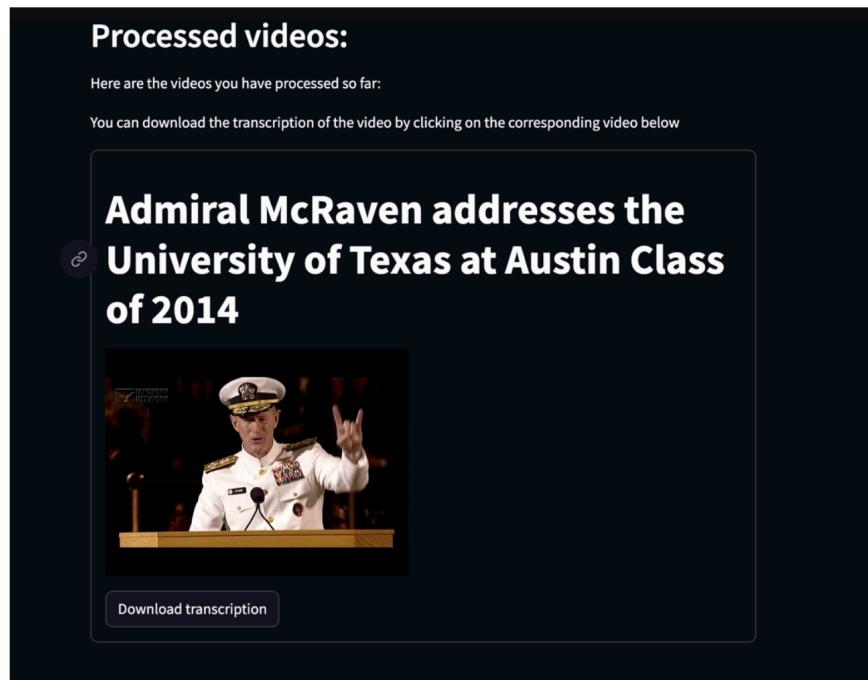
5. Open a browser and access the yt-whisper service at.
http://localhost:8503



6. Once the application appears, in the Youtube URL field specify a Youtube video URL and select Submit.

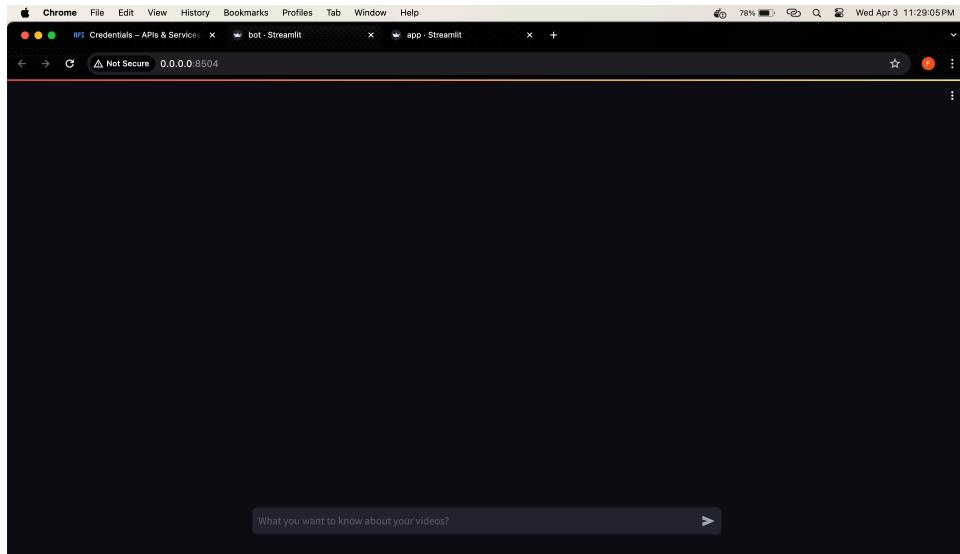


- After processing the video, a video list appears in the web app that informs you which videos have been indexed in Pinecone. It also provides a button to download the transcript.



Using the dockerbot service

- Open a browser and access the service at. <http://localhost:8504>



9. The following example asks the question, "What is a sugar cookie?".

A screenshot of a mobile-style interface titled 'Dockerbot'. At the top, there's a dark header with a small icon and the text 'What is a sugar cookie?'. Below this is a white content area. It starts with a 'Dockerbot' icon and the name 'Dockerbot'. The text explains the origin of the term 'sugar cookie' from Admiral McRaven's speech at the University of Texas at Austin Class of 2014. It describes the discipline involved in rolling around on sand until every part of the body is covered. The text continues to explain the purpose of this exercise, which is to test endurance, patience, and the ability to deal with discomfort. It notes that despite efforts to maintain a perfect uniform, trainees would end up looking like 'sugar cookies' without appreciation. The text concludes by symbolizing an important life lesson of persevering through challenges and moving forward despite setbacks. At the bottom, there's a list of five YouTube links, each starting with 'https://www.youtube.com/watch?v=' followed by a unique identifier. A search bar at the bottom contains the placeholder 'What you want to know about your videos?' followed by a right-pointing arrow.

10. Docker Compose is a tool for defining and running multi-container applications.

- Compose makes it easy to run this application with a single command. **docker compose up**.

```
(base) fevenbelay@FevenB-Air docker-genai % docker compose up
[+] Running 2/0
✓ Container docker-genai-bot-1      Created
✓ Container docker-genai-yt-whisper-1 Created
Attaching to bot-1, yt-whisper-1
bot-1          |
bot-1          | Collecting usage statistics. To deactivate, set browser.gatherUsageStats to False.
yt-whisper-1   |
yt-whisper-1   | Collecting usage statistics. To deactivate, set browser.gatherUsageStats to False.
yt-whisper-1   |
bot-1          |
yt-whisper-1   | You can now view your Streamlit app in your browser.
bot-1          |
bot-1          | You can now view your Streamlit app in your browser.
bot-1          |
yt-whisper-1   |
yt-whisper-1   | URL: http://0.0.0.0:8503
yt-whisper-1   |
bot-1          | URL: http://0.0.0.0:8504
bot-1          |
```