YouTube Custom Web App

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Abstract

This attempts to create a web app that has the ability to return popular YouTube videos of specific subjects based on criteria such as views, comment count, etc. for a specific subject. The subject chosen is Cyber Security. This will enable the user interested in cyber security to search the page for items not searchable in YouTube itself such as comments.

Design

I chose GCP for the cloud platform to use, and initiated an account with GCP's cloud shell, OAuth, YouTube API, and GCP based PostgreSQL database. I created the code to interact with the YouTube API, put sample responses into a dataframe, and then output into a csv due to YouTube API request limits. Another notebook was created specifically to put the csv data into a database located in GCP. After that occurred, I then created a web app in Flask and deployed it via GCP. The web app link is deployed and is located here. The page is rendered via bootstrap.

Data

The data is from the YouTube Data API v3. This has content to retrieve feeds related to videos, users, and playlists as stated here. The selected fields for this project are:

- Added_date
- Channel_id
- Channel_title
- Video_id
- Title
- Description
- Tags
- Category_id
- Duration
- View_count
- Like_count
- Favorited_count
- comment_count

Algorithms

There were no machine learning algorithms in this project.

Tools

Python, VSCode, GCP Cloud Shell Editor, PostgreSQL database

Tools

These slides as well as the app are deployed for view.