

# Final Project Proposal

This project is indented to build a program where users choose the billboard chart they want to see and then choose an item to know the details, the detail information will be gathered from YouTube, including views, likes and dislikes of the top 20 videos related to the item.

Data resources:

1. Billboard website: <https://www.billboard.com/>  
Billboard website contains various music information like charts, news, video, photos.
2. YouTube API: <https://developers.google.com/youtube/v3/docs/search/list>  
YouTube API can be used to search for videos matching specific search terms, topics, locations, publication dates, and much more.

Self-assessment:

1. Web API you haven't used before that requires API key or HTTP Basic authorization (YouTube API) — challenge score: 4
  2. Crawling and scraping multiple pages in a site you haven't used before (Billboard website) — challenge score: 8
- \*Total challenge score: 12

Attempts description:

Step 1: Script billboard website to get the name and links of popular charts, and I will let user choose one chart to look at. Then I will script the ranking information about the chart. And user and choose an item to see detail information. Then I will use YouTube API to access the top 20 video information about the item, including the views, likes, dislikes of each video.

Data processing and presentation:

Final data include views, likes, dislikes for top 20 search results from YouTube, and the program will display a scatter plot for views vs like/dislike ratio.