**Project code:**

* Spotify data: I am using two API endpoints to get the data I needed for this project in Spotify

1. <https://api.spotify.com/v1/me/following?type=artist>

I can get all the artists related information from the response including name, popularity, artists profile image and etc.

1. <https://api.spotify.com/v1/artists/artist_internal_id/top-tracks?market=US>

I can get all top tracks of particular artists in the US. Normally, each artist has 10 or so top tracks. Each track would contain information including track name, popularity, album, and etc.

I used Oauth 2.0 authentication method to get access the Spotify endpoint. Basically, it is needed to create a Spotify account and login the developer console to get client id and client secret in order to generate bearer token for authentication. Please note that the bearer token will be expired every 24 hours. If you need to replicate the data query process, you may need your own Spotify account to generate new bearer token for authentication. With the bearer token, I used Python “requests” package to send request to each API endpoint to get data and merged the results from each endpoints into the same file called “spotify.json.”

* Twitter data: