Rock Your World

21.07.2020

Yuval Hering

Overview

This project is part of 'Topics in Digital Humanities' with the guidance of Yael Netzer.

In this project I chose to take song lyrics and process them into a format that I can analyse and extract locations name and show them on a map.

I chose this project because music and traveling are a big part of my life, and I am passionate about the connection of both.

During my work I used the methods that have been taught in the course, also I ran into different tools that helped me to process the data and extract all the necessary information from it.

Goals

The main goal of this project is to work with human-readable data and convert it to machine-actionable data.

1. Convert song lyrics into Json format that contains all the necessary information for processing into markers on a map.
2. Work with different tools and libraries to process the data.
3. Use the methods that have been taught in the course, work with unstructured data and automated it into structural and visual data.

Specifications

The processing of the lyrics includes the following steps:

1. Choose the artist- I wrote a website in which the user can choose the artist he wants to get the information about. The website has been written in html and js.
2. Get The song lyrics- the artist name is sent to the server (that I wrote in python) via http request, the server sends a request to 'api.genius.com' to get the 20 most popular songs of the artist.
3. Find locations in lyrics- the lyrics of each song are classified with the 'StanfordNERTagger' tool, and I filtered and saved only the words that were classified as 'LOCATION'.
4. Find location coordinates- after the creation the list of locations, the server sends a request to 'geopy' to get the coordinates for each location.

5. Creation of Json response- after the server collects all the necessary information it creates Json that will be the response to the client request. The Json contains a list of locations, and for each location the following information - name, latitude, longitude, and list of all the songs that appear in it. For each song - the artist name, song name, lyrics and url for the song page in 'genius.com'.
6. Analyzing the response into markers on the map- the clients get the Json from the http response and for each location creates a marker on the map. Each marker contains the location name and all the songs that this location is mentioned in. Each song is a hyperlink to the song page in 'genius.com'. For the map I used 'leaflet' library with a 'mapbox' map.
7. Download the Json file - the user can download the Json file that contains all the data of the markers on the map. That way the user can see the structured data and not only the final output.

Conclusion

I have learned a lot from this project, about analyzing and converting unstructured data, working with different tools such as APIs and libraries, writing a server-client application, and I realized how many artists mention locations in their songs.

I really enjoyed this project, and glad to take part in it.

You can find the project in https://github.com/yuval0hering/rock-your-world2