

CMPS 263 Final Project Data, Visualization and Interaction Design and Key Challenges:

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The Motive:

The Primary motive behind the project is to display the trend change of music with time for a certain location. In this way we could analyze how the contemporary trend in music changes across various parts of the globe. By trend we don't really mean a long-lasting dominating genre of music over a certain period, but the micro changes that happens in shorter duration of time. In that sense the project is novel and hasn't been implemented in the past. Also, other insights like which countries have different or similar trends for a certain time or how widespread a track or artist is for a certain time could be explored.

- **Data, Visualization and Interaction Design:**

The dataset mainly consists of two csv files named Artist.CSV, idCountry.csv and a json file named countries.geo.json (Artist.csv is further broken down into 12 files for 12 months). The attributes as mentioned below would be used to visualize a world map with the current music trend for a certain location.

In addition, the tooltip data would pop the top artists for a certain region in the world along with their ranks and daily stream for the current trending song. On further clicking that same region there would be another pop up with different other famous artists with above mentioned attributes.

There would be a timeline to scroll through temporal data which would change the visualization and track and artist info according to the trend. For a certain country there would be a visualization for top few artists (the number could be chosen) and for Artists there would be a visualization for the regions in the world where the artist is mostly listened to.

Also, the region USA would be used to find the current trending genre of music.

Data	Attribute	Tooltip data	Interactive data
Artist.csv (broken to 12 csv files)	Artist info.	No	No
Countries.geo.json	Regions	YES	YES
idCountries.csv	Regions	YES	YES

- Key Challenges:

1. Using python script to create 12 csv files out of one big CSV file for making the process faster. This step also includes getting rid of redundant and unnecessary data.
2. Adding country IDs and adding genres of music for better visualization.
3. Joining CSV file with geoJson to figure out regions in terms of country IDs.
4. Using data in form of associative array for faster interaction when slider is used.
5. Selecting Top artists and trends from over 40,000 artists and 42 countries to project most relevant data.