

deSigners

SI 206 Final Project – Spotify, Ticketmaster, and Amazon Music – 4/22/19

Presentation slides: https://www.canva.com/design/DADXnE0BLDo/IF-qyQFQGzb0MhONuZbk0w/view?utm_content=DADXnE0BLDo&utm_campaign=designshare&utm_medium=link&utm_source=sharebutton

Project Goals:

We successfully learned how to use new APIs and manipulate data to create attractive visualizations that tell us useful information about the data we collected. We were also able to manipulate data from one website to use in another API's search!

Problems Faced:

At first, we wanted to use the YouTube API, but it was being difficult with the amount of requests and data we were able to pull. So, we tried scraping the YouTube website using BeautifulSoup, but we ran into the same problem. In the end, we decided to use BeautifulSoup for Amazon Music instead!

Calculations:

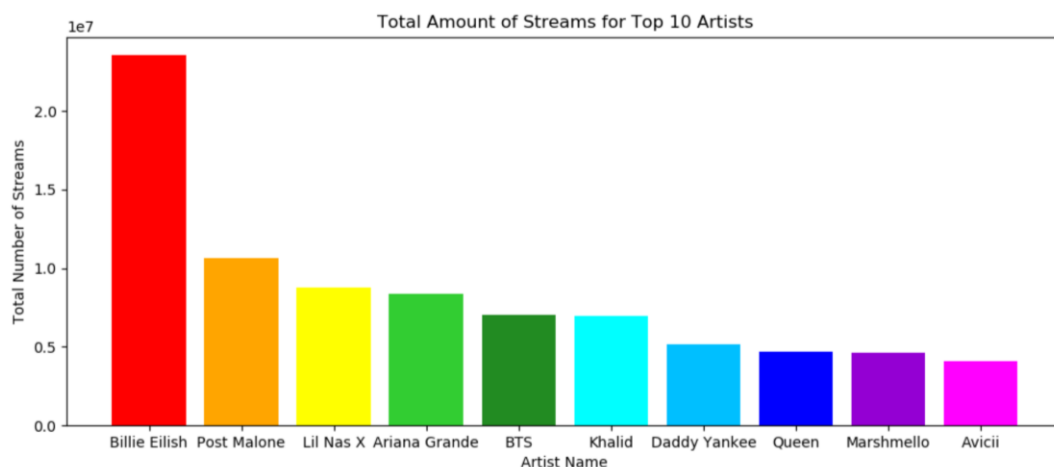
Spotify—using the Spotify top 200 songs list at <https://spotifycharts.com/regional>, we calculated the total amount of streams in this list per artist using dictionary accumulation.

Ticketmaster—using the top 3 artists with the most streams from the Spotify site, we used dictionary accumulation to calculate the number of events/concerts registered in each U.S. state for each of those artists, and then the total events for each state by all three artists.

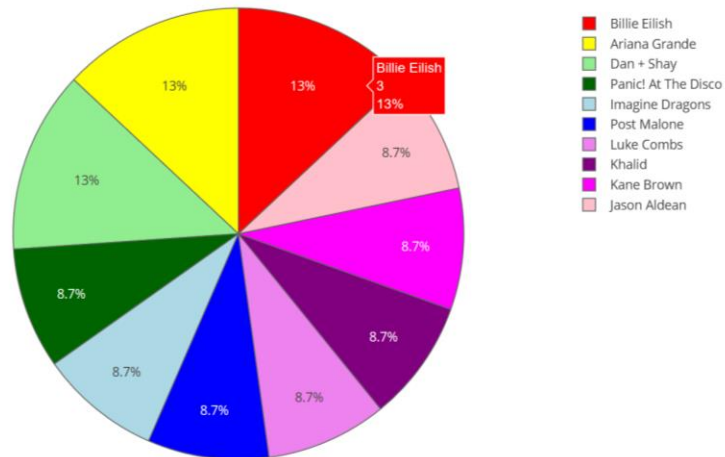
Amazon Music—Using the Spotify top 200 songs list, we “counted” the total number of times an artist occurred on the top 100 most played songs playlist on Amazon Music using dictionary accumulation.

Visualizations:

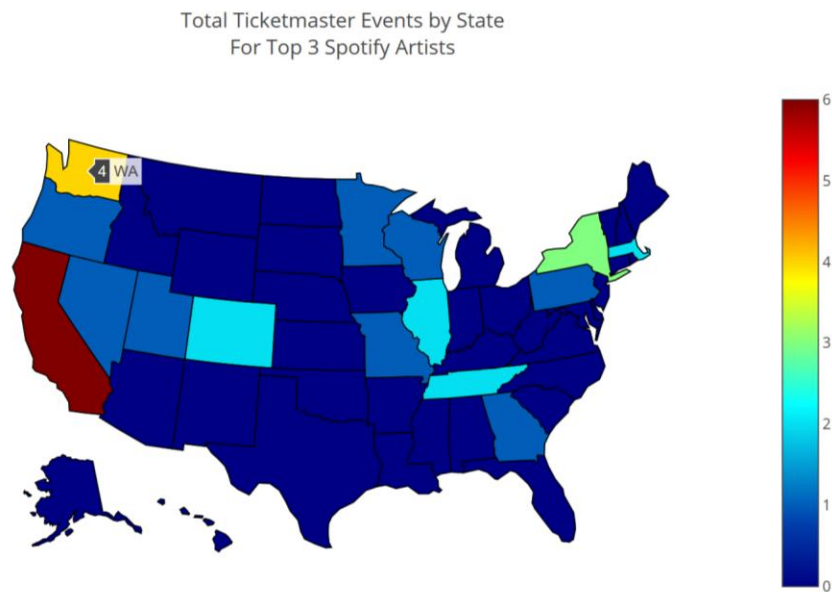
Bar Chart of the Total Amount of Streams for Top 10 Artists—Matplotlib (with modified colors)



Pie Chart of the Top 10 Artists that Appear Most in Amazon Music—Plotly (with modified colors) <https://plot.ly/~carolynduran/24/#/>



Choropleth of the Total Ticketmaster Events by State for all Three Top Spotify Artists—Plotly <https://plot.ly/~carolynduran/26/total-ticketmaster-events-by-state-for-top-3-spotify-artists/#/>



Instructions:

1. Run ticketmaster.py using a new terminal window in Python
2. When an image popup occurs, feel free to close the window so that the code can continue to run. 😊
3. The JSON and CSV files appear in the file folder
4. The database deSigners.sqlite appears in the file folder
5. For the visualizations:
 - a. artists.png appears in the file folder
 - b. Amazon Music and Ticketmaster visualizations appear in browser windows

Documentation for each function:

see comments in Python files (spotify_and_amazon.py and ticketmaster.py)

Resources:

Date	Issue Description	Location of Resource	Result
4/17/19	Trouble obtaining the correct event information from Ticketmaster in the correct format.	Ticketmaster API (ticketpy) sample code from GitHub	Learned the format for searching for attributes using the Ticketmaster API, extracted event data from artist names and state codes.
4/19/19	Needed help with setting up code needed to create bar graph visualization.	Matplotlib example code	Able to use the documentation at this resource to write the basic code for the bar chart.
4/20/19	Trouble setting up Plotly information to be able to run Plotly code functions.	Getting Started with Plotly for Python	Helped to ensure correct setup for using the API and login information necessary for running code.
4/20/19	Trouble writing code to correctly create different Plotly plot types.	Plotly cheat sheet	Learned the basic format for constructing Plotly code for the pie chart and choropleth.
4/21/19	Issues with extracting the correct data types and information from the Spotify website using BeautifulSoup.	Beautiful Soup documentation	Helped to obtain the correct data from Spotify to use in further code including when using the Ticketmaster API.