

# Top Spotify Songs

## Requirements - Data Visualization Track

### Specific Requirements: Data Visualization Track

- 01 Your project must include visualizations. The visualizations can be created with Python (e.g. Matplotlib, Pandas plotting, hvplot), JavaScript (e.g. Plotly or Leaflet), or a Python or JavaScript visualization library that was not covered in class.
- 02 Data must be stored in and extracted from at least one database (PostgreSQL, MongoDB, SQLite, etc).
- 03 Your project should include at least one JavaScript or Python library that we did not cover.
- 04 Your project must be powered by a dataset with at least 100 records.
- 05 Your project must include some level of user-driven interaction, such as:
  - HTML menus, dropdowns, and/or textboxes to display JavaScript-powered visualizations
  - Flask backend with interactive API routes that serve back Python or JavaScript plots
  - Visualizations created from user-selected filtered data, which could be powered by JavaScript libraries, Python in Jupyter Notebook, or Command-line Python scripts that save visualizations locally
- 06 Your final visualization should ideally include at least three views.

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### Goal

- Pull Billboard Hot 100 lists (2006 - 2024) & find yearly info on songs w/ Spotify API

### Data Cleaning Method

- Pull list of tracks top-100 tracks for each year using billboard.py python module
- Pull info about each tracks using Spotify API
- Export as SQLite
- Use SQLite file for data when creating app.js

### Resources

- [Spotify API Documentation](#)
- [github.com/mhollingshead/billboard-hot-100](https://github.com/mhollingshead/billboard-hot-100)
- [github.com/quoguo12/billboard-charts](https://github.com/quoguo12/billboard-charts)

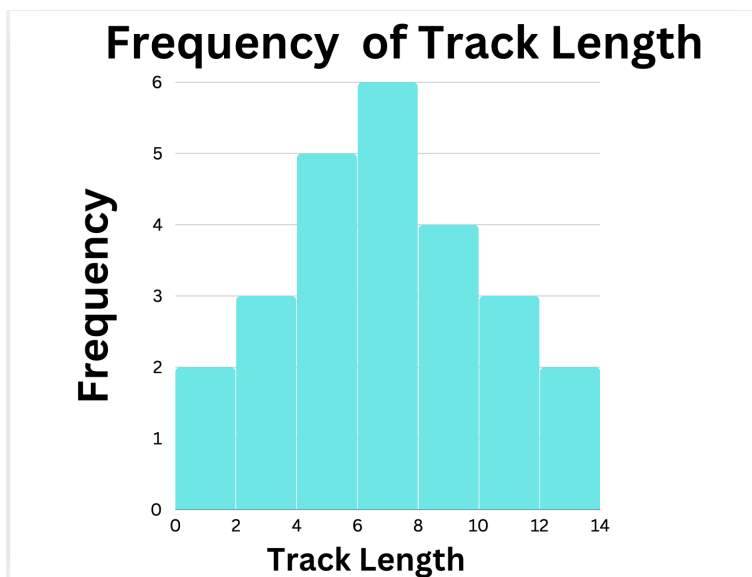
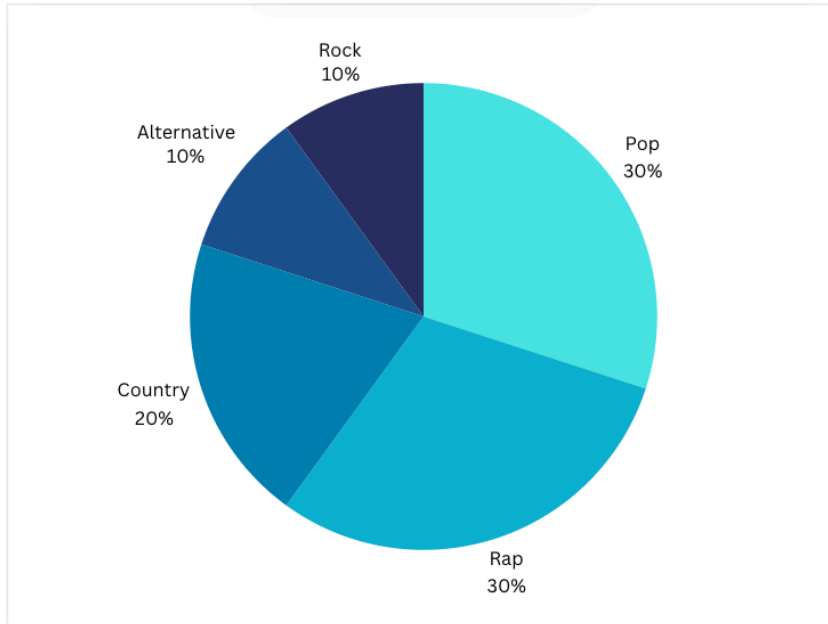
### User Interaction

- Dropdown menu to select year
  - Updates charts and Visualizations

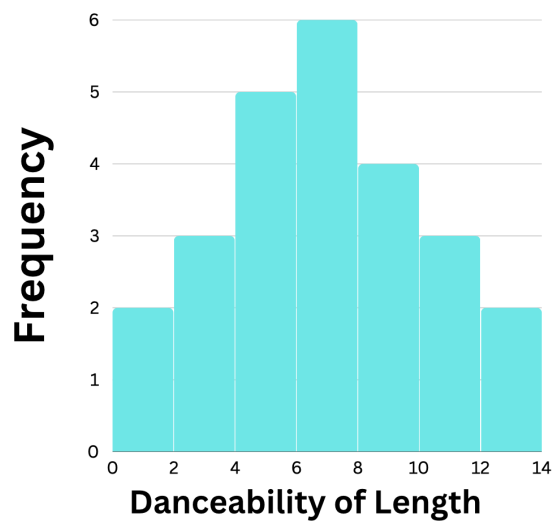
### Visualizations (Different features for each)

- Pie Graph / Genres
- Histogram / Track Length
- Histogram / Danceability or Energy

### Example Charts:



## Frequency of Danceability of Track



### Roles

- Date Cleaning (billboard.py, spotify API, Export as SQLite) - **DuVoe**
- Pie Graph / Genres - **Zach**
- Histogram / Length - **Ethan**
- Histogram / Danceability Energy - **Jon**
- HTML / Page Formatting - **Makenna**