Project Proposal

**Requirements**

* Your visualization must include a Python Flask–powered RESTful API, HTML/CSS,
* JavaScript, and at least one database (SQL, MongoDB, SQLite, etc.).
* Your project should fall into one of the below four tracks:

1. A custom “creative” D3.js project (i.e., a nonstandard graph or chart)
2. A combination of web scraping and Leaflet or Plotly
3. A dashboard page with multiple charts that update from the same data
4. A “thick” server that performs multiple manipulations on data in a database prior to visualization (must be approved)

* Your project should include at least one JS library that we did not cover.
* Your project must be powered by a data set with at least 100 records.
* Your project must include some level of user-driven interaction (e.g., menus, dropdowns, textboxes).
* Your final visualization should ideally include at least three views.

# Name of the project: Rythmanalytics

# Summary

* The music business is constantly getting more and more data driven. The growth of streaming services such as Spotify and Apple Music has really accelerated that change. Most executives now understand the value in analyzing user behavior and adapting strategies based on those metrics. In this project, we will read music dataset, analyze and visualize them using a Python Flask–powered RESTful API, HTML/CSS. This will be a dashboard page with multiple charts that update from the same data

# Team Members:

* Deepmala Agarwal
* Brandon Warren
* Willie Wiedenmann

# Description/Outline

In this project we will try to outline nine use case analysis. These are listed below:

* Proven artist by year
* Proven artist by Sales
* Proven artists by Critic Rate
* Analysis on music consumed against music created
* Performance analytics such as fan sentiment,
* Performance analytics with music similar to other hits and providing the prediction
* Flag top five songs as early risers
* How many albums have been sold since their debut by artist
* Key words in lyrics which gain hits by year

# Datasets to be used

<https://www.kaggle.com/rakannimer/billboard-lyrics>

<https://www.kaggle.com/revilrosa/music-label-dataset>

# Libraries Used

* Leaflet: <https://leafletjs.com/>
* Polymaps: <http://polymaps.org/>
* AnyChart: <https://www.anychart.com/products/anymap/overview/>

Tasks

* The nine use cases will be divided between our team
* Following task will be done end to end by each team member
  + Create a connection to database
  + Create server [app.py] to read database and manipulate data
  + Visualize it in the client using flask,HTML,CSS,JS
* Final presentation of the analysis