Enhancement Three:

The artifact I created is a program that reads a CSV file of Spotify data into a data frame for showcasing playlist statistics, however, it will have a database interface within the next few days. Unfortunately, I encountered numerous issues with MongoDB hosting and will be exploring other methods. However, all other aspects of the program are operational. This artifact was originally created in the summer of 2024. This project was included in my ePortfolio because it deals with web dashboards and data displays which are very important and common today, especially in business climates. The usage of a large quantity of data also makes it perfect for a database interface. While this project is not identical to it’s original artifact form, it takes the same dash dashboard and migrates it from Jupyter notebook to Python. In addition, it migrates from cloud to local hosting, allowing anyone to utilize this program with their own data. It also now supports completely custom playlist uploading. This project showcases an ability to mesh mathematical data analysis through plotly with a traditional web dashboard using dash. I believe that this project will meet the course outcomes as planned once I can fix the MongoDB service. My test environment has had issues with MongoDB and local storage, however, I have clean installed Python and Mongo which should allow the compatibility needed. This will allow me to port over my database commands from the previous artifact and utilize a database for those requirements. One thing I learned while working on this artifact was how difficult it is to setup Python properly and how much of a difference it can make. When I originally setup Python on my computer, I must have downloaded it to a specific user and it now conflicts with another installation. Whenever I was utilizing pip install or other commands, it would show a successful installation, however, it would not work which prevented me from using PyMongo. I have learned to properly setup Python in the future and have begun the process of clean installing windows and Python and necessary packages.

Enhancement List:

* Refined and added additional comments
* Added web dashboard using dash
* Customizable input using CSV and ability to use database
* Drop down to select viewed chart
* Data frame showcasing all data with resizable scaling
* Moved from cloud to local hosting
* Migrated from jupyter notebook to python

Instructions for Testing:

1. Open exportify.net
2. Sign in with Spotify and export playlist
3. Open MongoDB Compass
4. Create a new connection using localhost:27017
5. Connect to this localhost connection
6. Create a new database named SpotifyAPI
7. Add a new collection named SongData and upload your liked\_songs.csv
8. For all of the yellow data fields that come up, set the data type to string and select import
9. Open dashboard.py with PyCharm
10. Click the run button at the top or at line 217 to run the dashboard
11. The console will provide a local port number such as <http://127.0.0.1:8002/>
12. Click on this port link to view the dashboard
13. Select the dropdown in the top left to select the data you want to see
14. In the bottom right, there is a data frame to manuever
15. Use the bars on the bottom and right sides to scroll the data, click and drag between columns to expand or shrink