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Taylor Swift’s Songs Analysis

This paper will be discussing an analysis of all deluxe Taylor Swift albums. The reason I chose this topic is because I have been a huge fan of Taylor Swift ever since her debut album, *Taylor Swift*, came out in 2006. Also, I wanted to see how her music has changed over time and the differences between albums. When it comes to Taylor Swift and the economy, her tickets for her American tour have been a main talking point. Recently, the “Eras Tour” tickets were sold through Ticketmaster and it was giant scandal. Ticketmaster botch the entire sale by not following Swift’s contract of no dynamic pricing, making the queue easy to access (14 million bots and people in the queue; only 1.4 million presale codes were released), and creating a process with no way to eliminate bots. With this, Taylor has broken so many records throughout the years. You can see this by looking at her most recent album *Midnights.* After the release, Taylor Swift became the first person ever to hold all top ten spots on the “Billboard Hot 100” (Ahlgrim, 2022). Swift is now the only musician to have five albums sell over 1 million units in its debuting week (Young, 2022). We can concur from this and the fact that she has had extremely long career at the top that she is one of the biggest musicians of all time. So, the main people who would care about this analysis are her loyal long-time fans. This subject can also teach others in class who might not listen to her music. Most people who are not long-time fans really know how diverse her discography is.

When it come to the dataset, I took a dataset from *Kaggle* and edited it. How I edited it was by only keeping the albums of most importance and changing duration from milliseconds to seconds. Another thing was taking out the column “URL” which specifies each song’s personal URL. The reason for getting rid of this column is because the dataset already included Spotify’s ID for each song. The albums included in the dataset are *Taylor Swift, Speak Now (Deluxe Edition), 1989 (Deluxe), reputation, Lover, folklore (deluxe edition), evermore (deluxe edition), Fearless (Taylor’s Version), Red (Taylor’s Version),* and *Midnights (3am Edition)*. The reason for deluxe albums is so the dataset has all important songs, and the albums are actually accurate. *Taylor’s Version* albums are albums she rerecorded, and they include more songs than their original release. The rerecorded albums and all albums released from *Lover* and so on Taylor Swift owns. As you can see in *Figure* 2, the dashboard focuses on overall albums. However, the dataset does include song titles, so further analysis could happen with that as well. The reason why I did only the albums is to make the story more cohesion. In *Figure 1*, demonstrates the colors I used to describe the albums on the dashboard. Each album Taylor Swift has created has a correlating color, so that is my reason for selecting these specific colors.

*Figure 2* demonstrates the dashboard I created. The “Album” section at the top is a filter. So, if you just want to know about a specific album, all you have to do is select it and it will highlight all relating parts of the album. Another feature is if you select a section of the “Album Percent Total for Overall Duration” pie chart, shown in *Figure 7*, a percent will pop up, as shown in *Figure 8*. This percentage tells how much time that album is compared to the overall duration of her discography. So, for the example shown in *Figure 8*, The album *evermore (deluxe version)* makes up 8.808% of total time in her discography. The columns used from the dataset in the dashboard are “album,” “release\_date,” “acousticness,” “energy,” “loudness,” “speechniness,” “tempo,” “valence,” and “duration\_seconds.” “Album” refers to the name of the album the song is on. “Release\_date” refers to the day the song was released using month/day/year formatting (Priester, 2022). “Acousticness” refers to the confidence measure (from 0.0 to 1.0) of whether a track is acoustic. The higher the number, the more acoustic the song is. “Energy” is a measurement from 0.0 to 1.0 showing a perceptual measure of intensity and activity. The closer to 1.0, the higher the energy (Priester, 2022). “Loudness” is the overall loudness of a song in decibels. The number is an average throughout the song and values are usually negative (Priester, 2022). “Speechniness” measures the detection of spoken words in a song and measures from 0.0 to 1.0. The more speaking-like sound in a song, the higher the number. “Tempo” estimates the speed and pacing of a song in beats per minutes. “Valence” measures the song’s conveying of positivity on a scale of 0.0 to 1.0 (Priester, 2022). Songs with lower valence tend to be depressing and sad songs. Lastly, “duration\_seconds” is the number of seconds in a song (Priester, 2022).

Examining the “Average Speechiness vs. Average Tempo,” *Figure* 3, shows how each album speech and tempo correlate through a tree map. Albums that are categorized as pop have a higher speechiness than albums of other genres. When it comes to average tempo, the albums range from 119.74 to 136.38. There are not huge differences between the albums’ average tempos, but it is shocking that albums like *Lover* and *Midnights (3am Edition)*, two pop albums, have lower average tempos than *evermore (deluxe edition)*, a folk album.

*Figure 4* deals with how acoustic Taylor Swift albums have been throughout the years. Her most recently written album (excluding *Taylor’s Version* albums) have been her most acoustic. This is shocking because acoustic seems to correlate with what she has down earlier on. When she was in country, most of her concert were sang on a simple guitar. Swift’s albums became more produced when she started to experiment with pop. So, shocking that her debut album, *Taylor Swift*, is one of the lowest scoring and *Lover*, a pop album,is fourth most acoustic album after *evermore (deluxe edition)*, *folklore (deluxe edition)*, and *Midnights*. However, her two folk albums being first is not surprising. A lot of the songs on those albums are slow and have quiet background with little extra production.

The next chart, *Figure 5*, displays album’s average energy to their average tempo. *1989* comes in first, which is not very surprising. Every song on the album, no matter what the lyrics are, sounds energetic and fun. She had spoken in the past about the fact that the name in *1989* because of her experimenting with 1980s era sounds and music. The lowest is *folklore (deluxe edition)*. It makes sense because most of the music is slow and not super energetic. The only big shocker in this category is *Midnights (3am Edition)* has less average energy and temp than *evermore (deluxe edition)*. *Midnights (3am Edition)*, a pop album, has many songs with high energetic beats, including the two lead singles, “Anti Hero” and “Bejeweled.” *Evermore (deluxe edition)*, a folk album,is known for its heartbreaking storytelling, not for fast past and energetic songs. However, *Midnights (3am Edition)* is a longer album when it comes to duration, so there is bound to be differences from assumptions to averages of measurements for albums.

*Figure 6* shows the bar chart showing loudness and valence of listed albums. Taylor Swift’s albums are known for having a mix of everything. Using *Red (Taylor’s Version)* as an example, it features super slow and depressing songs, like “I Almost Do (Taylor’s Version)” and “Sad Beautiful Tragic (Taylor’s Version),” and loud happy songs, like “22 (Taylor’s Version)” or “Holy Ground (Taylor’s Version).” The reason for making this bar chart is to see if the fans expectations and assumptions match the actual results. For example, the albums *folklore (deluxe version)* and *evermore (deluxe version*) are sad folk albums. The expectation was for both to have a very negative “loudness” score and have a very low “valence” due to them both being slower and depressing album compared to the rest of the ten. Despite this, they both had high valence scores. Both albums outscored *reputation* and *Midnights (3am Edition)*, two pop albums with high energy songs.

The last chart featured in the dashboard, *Figure 7*, is a pie chart showing the percent of total duration per album. The album with the longest total duration is *Red (Taylor’s Version)* with 15.544% of total duration. This makes sense with it being the longest album with 30 tracks. It also makes sense that *Fearless (Taylor’s Version)* is second with 13.472%. The reason it makes sense is because with the two *Taylor’s Version* albums Taylor Swift included tracks from her vault to boost the incentive to stream this version of album as to the stolen version. The album with shortest total duration is *Taylor Swift* with 7.254%. It does have the least number of tracks with 13. However, *reputation* is right behind T*aylor Swift* with 14 tracks, but it still is 0.518% higher in percent of total duration, 7.772%. Comparing this with having ten albums is a big difference. Overall, this category made sense the most with no real difference from my assumptions.

In conclusion, Taylor Swift’s diverse discography makes an analysis of her albums a lot more interesting than to artists of one genre. Each of her albums have such a diverse song range, meaning genre and sound, that a lot of facts contradicts many fans’ assumptions have about albums.

Chart

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Figure 1: Album Color Legend

Chart

Description automatically generated

Figure 2: Taylor Swift's Album Analysis Dashboard

Chart, treemap chart

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Figure 3: Tree Map showing difference between average speechiness of an album to average tempo

Chart, scatter chart

Description automatically generated

Figure 4: Album's acoustiness level throughout time

Chart, scatter chart

Description automatically generated

Figure 5: Graph showing an album's average energy level versus average tempo

Chart

Description automatically generated

Figure 6: Bar graph showing an album's average valence versus average loudness

Chart, pie chart

Description automatically generated

Figure 7: Every album percent of total for duration

Chart, pie chart

Description automatically generated

Figure 8: Selected album duration pie chart

Reference

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