Mapping Taylor Swift: Visualizing Genre Evolution, Word Themes, and Tour Geography
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INFSCI 1520 Information Visualization – Spring 2025
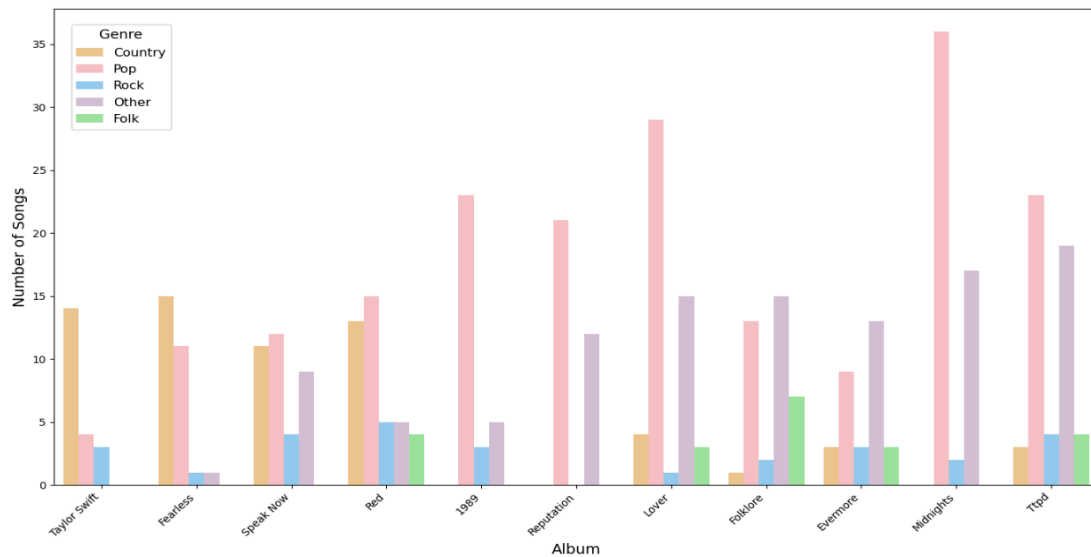Github Link: https://github.com/jlw252/INFSCI1520

Figure 1. This **bar chart** visualizes how Taylor Swift's musical genre composition changes over the course of her discography. Early albums (*Taylor Swift*, *Fearless*, *Speak Now*) lean heavily on **Country** influences. A major shift to **Pop** is seen starting from *1989* and peaking in *Midnights*. *Folklore* and *Evermore* introduce a noticeable presence of **Folk**, signaling an experimental era. Elements of **Rock** and **Other** genres are scattered across most albums but never dominate.

Figure 2. A **word cloud** visualizing the most frequent words in Taylor Swift's song lyrics across her albums. The larger the word appears, the more frequently it occurs in her lyrics. Each word is colored according to the **album it most frequently appears in**, using a custom color palette to distinguish albums (e.g. black for *Reputation*, pink for *Lover*, etc.). The words are arranged randomly, but compactly within the image space to emphasize volume and variation in lyrical language. Dominant words like **"you," "the," "I," "my," "me," and "love,"** are large and centrally placed, reflecting recurring emotional and personal themes in Swift's songwriting.
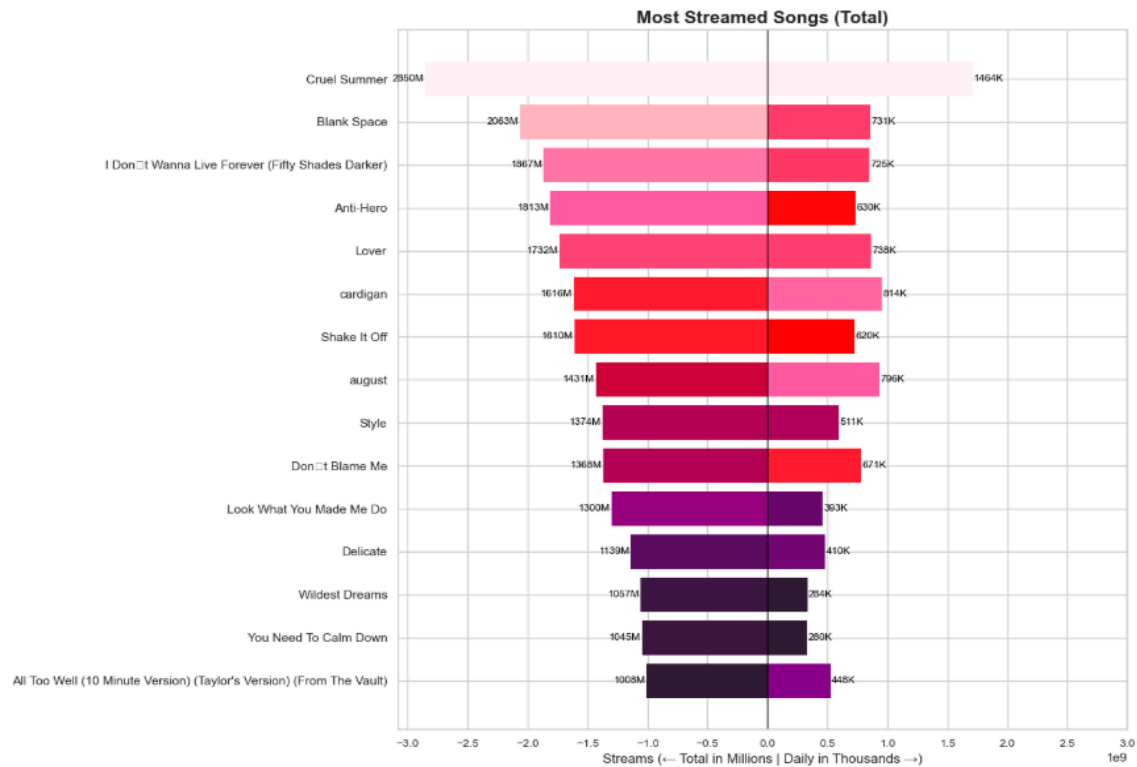
Figure 3. A **dual axis horizontal bar chart** displaying **Taylor Swift's most streamed songs**, based on cumulative streaming counts. **"Cruel Summer"** leads the chart with over **2.5 billion** total streams, showing explosive popularity since its re-release. Other major hits like **"Blank Space," "Anti-Hero,"** and **"Lover"** also surpass 1 billion total streams. Songs span across eras (from *1989* to *Folklore* and *Midnights*) illustrating her lasting popularity across musical phases.
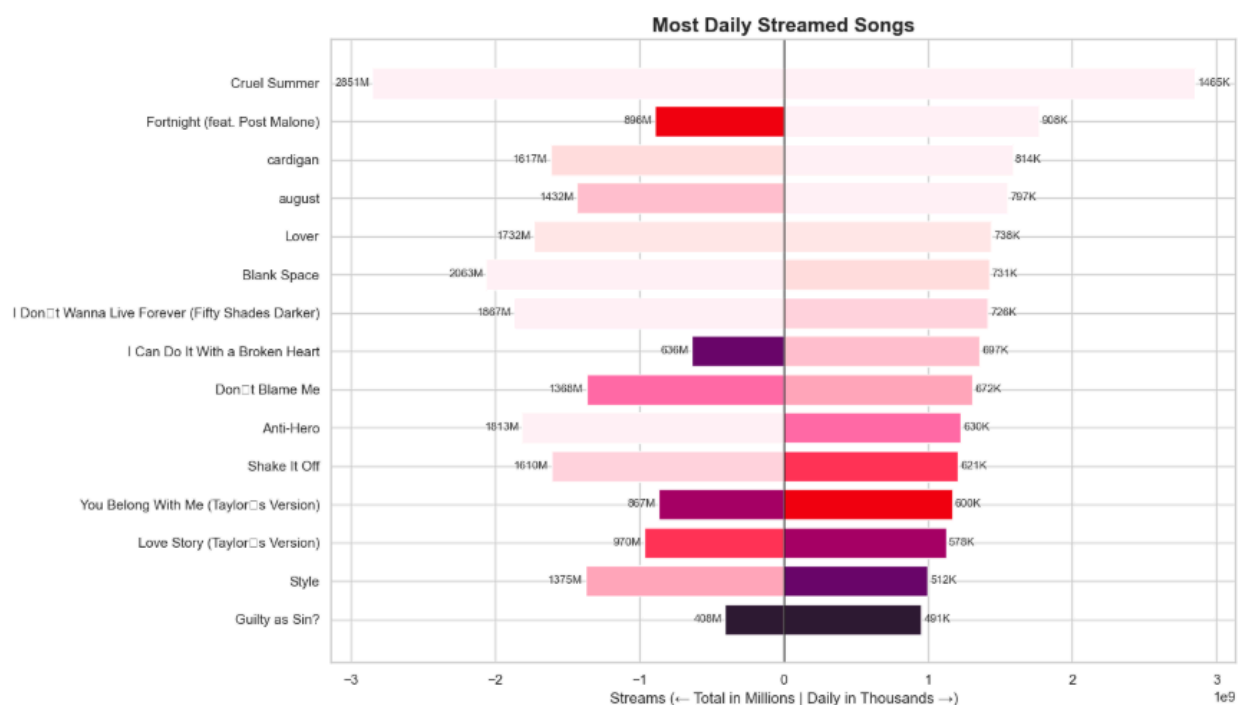
Figure 4. A **dual-axis horizontal bar chart** visualizing **Taylor Swift's most daily streamed songs**, comparing recent streaming activity with historical totals. **"Cruel Summer"** tops the list in both total (2.65B) and daily (906K) streams. **"Fortnight (feat. Post Malone)"** debuts at **#2 daily** with 806K streams despite being a new release, reflecting immediate popularity. *cardigan*, *august*, and *Lover* continue to perform well daily despite their earlier release dates. Songs like "Blank Space" and "Shake It Off" still hold high lifetime streams but show moderate current daily activity.
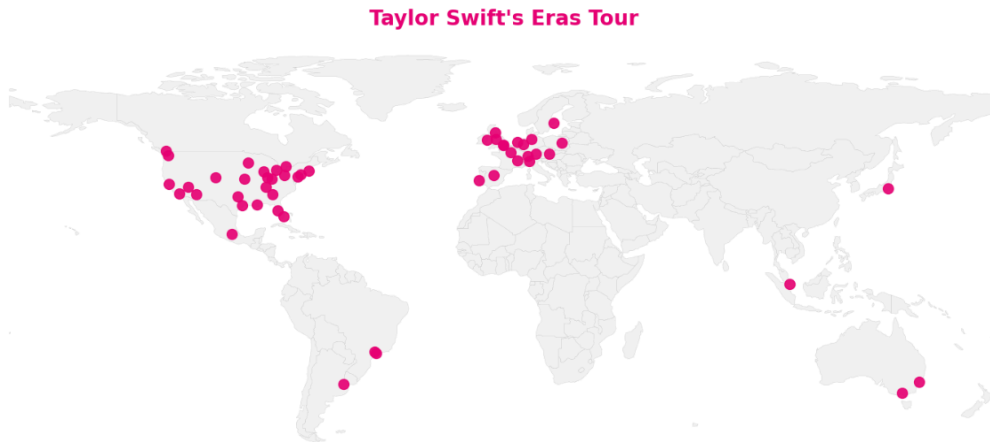

Taylor Swift's Eras Tour

Figure 5. A **global dot map** visualizing the locations of Taylor Swift's Eras Tour stops around the world. The tour is **highly global**, with performances in: **North America** (heavy concentration in the U.S. and Canada), **Europe** (extensive stops across the UK, France, and Germany), **South America** (select major cities such as São Paulo and Buenos Aires), **Asia-Pacific**: Includes Australia, Japan, and Singapore. No shows are currently marked in **Africa** and the **Middle East**, reflecting typical global tour patterns for major artists.

Data and Method:
Data Sources: Taylor_Swift_Albums.csv (lyrics, album names, genres), Taylor_Swift_Streams.csv (Spotify stream counts), eras tour dates.csv (concert locations and dates), Natural Earth shapefile (for map rendering)

Python Libraries: pandas, matplotlib, seaborn, geopandas, wordcloud, geopy

Processing:
- Lyrics cleaned and tokenized for word frequency.
- Genre labels standardized and grouped.
- Geocoding used to convert cities to lat/long for mapping.

Significance: This project offers a holistic view of Taylor Swift's evolution as a musical artist through the lens of data. It blends text analysis, genre categorization, global mobility, and streaming behavior. The word cloud reveals recurring emotional themes and vocabulary that define her songwriting style, while the genre distribution chart illustrates a clear shift from country roots to pop and indie folk experimentation. Streaming data highlights both enduring hits and newly surging tracks. Finally, the global tour map underscores her worldwide impact and ability to connect with audiences across continents. Together, these visualizations offer a multi-faceted look at how Taylor Swift has continuously evolved, rebranded, and expanded her audience. This project not only highlights her impact as a cultural figure but also demonstrates the power of data storytelling in music analysis.