

TIME BLUES

This project aims to visualize historical data of blues music. The texture of the records on the vinyl record player characterizes the quantity and quality of the blues music that appeared on different dates. The staff below it characterizes the most representative blues musicians and the quantity and quality of their compositions. The above-mentioned textures imply that the time machine has imprinted traces on the records of history, and the music imprinted by it is jointly written by great artists.

The texture of the record show that there may be a positive correlation between the quantity and quality of new songs. And the Songs between 1970s-2000s have more quantity and quality. The staff shows that Mary and Jay-z are artists who are both highly productive and maintain high quality.



Time blues-Final report

Lesong Jia

Instruct by Prof. Lingfei Wu, Alekhya Velagapudi and classmates

Figure Introduction

As shown in figure 1, the title, **main figure**, **panels**, **legend**, **findings text** are shown in the first page of this documentation.

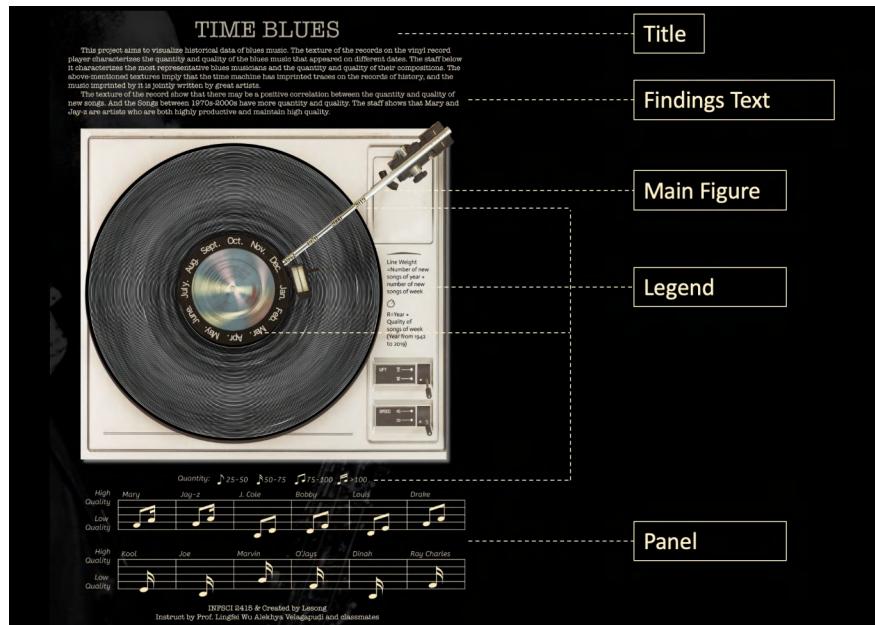


Figure 1. The figure introduction diagram

Concept and statement

This project aims to visualize historical data of blues music. The texture of the records on the vinyl record player characterizes the quantity and quality of the blues music that appeared on different dates. The staff below it characterizes the most representative blues musicians and the quantity and quality of their compositions. The above-mentioned textures imply that the time machine has imprinted traces on the records of history, and the music imprinted by it is jointly written by great artists.

Through this project, as shown in the finding text in Figure 1. First of all, we can discover the quantity, quality between the new works and their relationships in different time periods, which will help the discovery and research of the history, development law and important events of blues music. Second, we can observe high-yield artists and the quality of their music works, which will help us discover and evaluate great artists.

Data and method

The dataset used in this project comes from the UKMIX forum. And the source data comes from the Billboard charts from 1942 to 2019 including 26,529 blues music songs. As shown in table 1, the dataset gives information such as the name of the song, the author, when it hit the chart, and how long it lasted on the chart (CH), etc.

Table 1. The data example

Date Entered	CH	Title	Artist
1942-10-24	22	Trav'lin' Light	Paul Whiteman & His Orchestra
1942-11-14	9	White Christmas	Bing Crosby
1942-10-24	17	When The Lights Go On Again (All Over The World)	Lucky Millinder & His Orchestra
1942-10-24	14	Mr. Five By Five	Freddie Slack & His Orchestra
1942-10-24	14	Stormy Monday Blues	Earl Hines & His Orchestra
1942-10-24	5	Take It And Git	Andy Kirk & His Clouds Of Joy

In order to obtain the data used for visualization, the elements of the original data set are first screened, extracted and decomposed. Use the dropna() function to drop blank lines. Use the pd.to_datetime() function to regularize and extract dates into year, month and day respectively. Build a new dataframe, including the year, month, day, CH, Title and artist.

In order to get the main figure shown in Figure 1, the data is firstly counted to obtain the number (quantity) of new songs appearing on the list within the same date, and the total duration (quality) of these new songs on the list. Second, as shown in Figure 2, the arc is divided according to the date of the year, the year + the number of songs of the day is used as the radius, and the quality of the songs of the day is used as the line width to draw the main figure. In order to obtain a gentle line width and Radius change effect, the graph is simulated by data difference and scatter plot drawing.



Figure 2 Example of a circle

In order to get the effect of the panel shown in Figure 1, first, count the number of songs on the list and the average time (quality) on the list of different artists. Finally, the stave is drawn by the plt.plot() function, the artist's name is drawn by the plt.text() function, and the note is drawn by the plt.scatter(marker="\$\u266C\$") function. Among them, the height of the note on the staff represents the quality of the writer's work, and different notes represent different quantitative levels.

Code and Dataset

Please follow the link below to view the code and dataset used in this project and the report of this project :

<https://github.com/Lesong-Jia/Time-Blues.git>