

Rhythm Revealed

Question One: Understanding and interpreting Data

1. What is the average duration of top Spotify songs, and how has it evolved over the past years?
2. What are the most common genres among the top Spotify songs?
3. How does the Beats Per Minute (BPM) of a song correlate with its popularity or likelihood to become a top-ranking track on Spotify?
4. Which genre has the highest average popularity?
5. What are the average musical attributes that display the most robust correlation with a song's popularity on Spotify?

Question Two: Using Tableau for data analysis

Link -

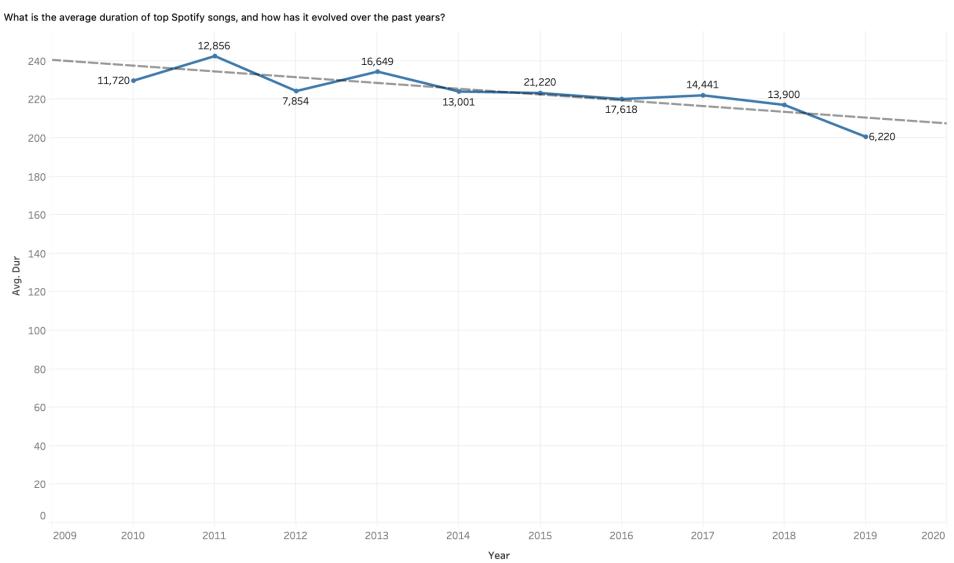
<https://public.tableau.com/app/profile/suhayra.salad/viz/INFOMGMT192Groupproject/Dashboard1?publish=yes>

- 1. What is the average duration of top Spotify songs, and how has it evolved over the past years?**

Using Tableau's line chart visualisation, we explored how song durations have changed over time in the world of the most popular Spotify tunes. Using important parameters like "Duration" and "year", we set out on an investigation. Using the x- and y-axes to represent "year" and "duration", respectively, we created an engaging story of temporal progression. A year is represented by each point on the line chart, which is painstakingly drawn to show the average duration of the top Spotify tracks. The elegant line that flows throughout time shows the subtle variations in song lengths over time. The line chart reveals the subtle changes with clarity and precision, enabling us to identify patterns and gain insights on how the average duration of the most popular Spotify tracks has changed over time.

Line chart visualisation

Using Tableau's line chart visualisation, we investigated the average length of popular Spotify tracks over time. Each point on the chart corresponds to a different year, and the y-coordinate indicates the average song duration in minutes.



Answer

We can see that there are a few dips and spikes in the line. This shows that the years **2011 & 2013** had the **highest average duration**. The line over time fluctuates as it goes up and down.

2. What are the most common genres among the top Spotify songs?

Reason

We investigated the common genres among the most popular Spotify tracks using Tableau's line chart visualisation. Through an emphasis on critical variables like "Genre" and "Year," we hope to gain some understanding. We created an engaging story of the prevalence of each genre across time, with the y-axis showing the frequency of each genre and the x-axis denoting "Year". The line chart shows the prominence of each genre within the top Spotify songs, with each point denoting a year. The flowing line provides a nuanced perspective on changing musical trends while gracefully tracing the changes in genre dominance. We were able to identify trends and obtain insights into the most prevalent genres among the top Spotify tracks over a period of time thanks to the line chart's clarity and accuracy.

We used the **Treemaps** visualisation so that we could see a more accurate response to our question.

We colour coded the **Genres** so it is easier to understand the differences in sizes.

We put the '**Top Genres**' into the **label** box under '**marks**' so that we clearly see which genre is which.

We put the '**top spotify songs**' into the **size category under marks** so we could see which is biggest and what others come next.

The Treemaps visualisation helped us arrive at a more accurate response to our question. We improved size differentiations' clarity by colour-coding the genres. Identification of the popular genres was made simple by placing them in the label box located under "marks." Furthermore, grouping the 'top Spotify tracks' according to size under marks made relative sizes easily visible, which facilitated rapid understanding of changes in genre dominance over time. This method works well for giving a thorough grasp of patterns of genre dominance and changes in Spotify users' musical choices.



Answer

The Spotify genres that are the most common are **Dance pop, Pop and Canadian pop**.

3. How does the Beats Per Minute (BPM) of a song correlate with its popularity or likelihood to become a top-ranking track on Spotify?

Using Tableau's line chart visualisation, we investigated the relationship between a song's Beats Per Minute (BPM) and its chances of becoming the number one song on Spotify. Our goal was to identify correlations, concentrating on critical variables such as "BPM" and "Popularity." Using the x-axis to indicate "Year" and the y-axis to display BPM values, a story about the impact of BPM throughout time was created.

The line chart, which showed the BPM trends in the most popular Spotify music, showed one year at a time. The smooth line skillfully traced the dynamic relationship between popularity and BPM, illuminating its subtleties. Because of the clarity and

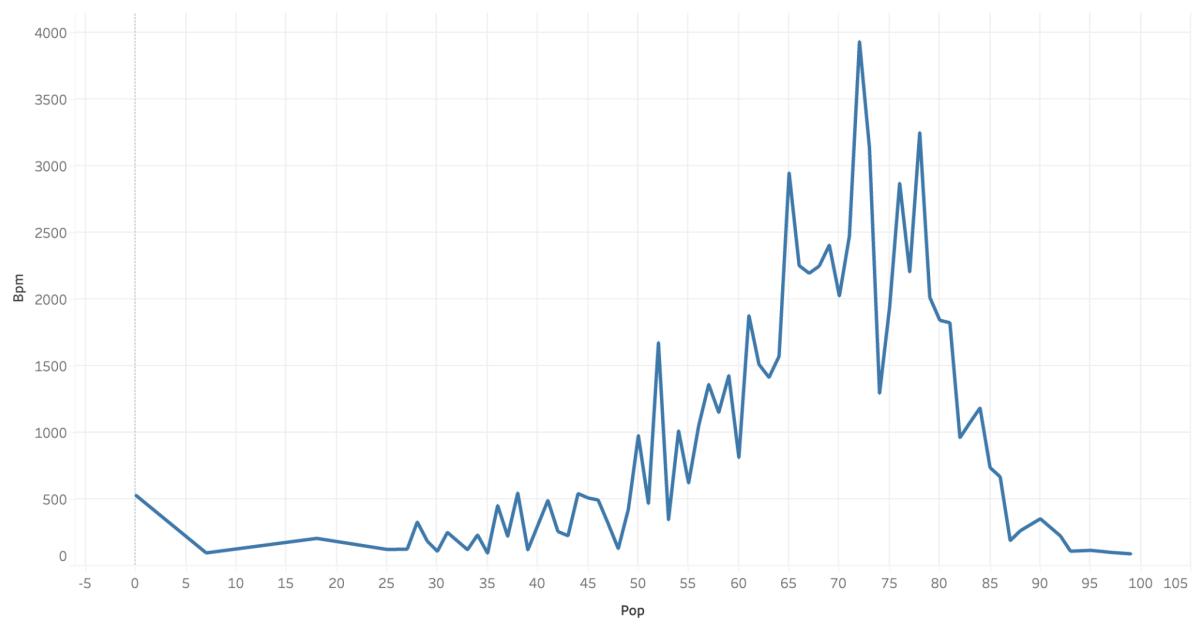
continuity of the line chart, this visualisation allowed us to understand how BPM links to a song's chances of becoming a top-ranking music on Spotify.

We conducted a thorough investigation on the relationship between a song's Beats Per Minute (BPM) and its probability of becoming a top-ranking tune on Spotify using Tableau's line chart visualisation.

In order to guarantee precision in our investigation, we utilised the subsequent methodologies:

Using Continuity with Lines: Our goal was to create a visual story that clearly illustrated the relationship between BPM and a song's popularity over time. To this end, we represented the data points using continuous lines.

By employing these methods, our line chart representation provides a thorough and perceptive examination of the relationship between a song's Beats Per Minute (BPM) and its level of popularity or potential to become a top-ranking tune on Spotify.



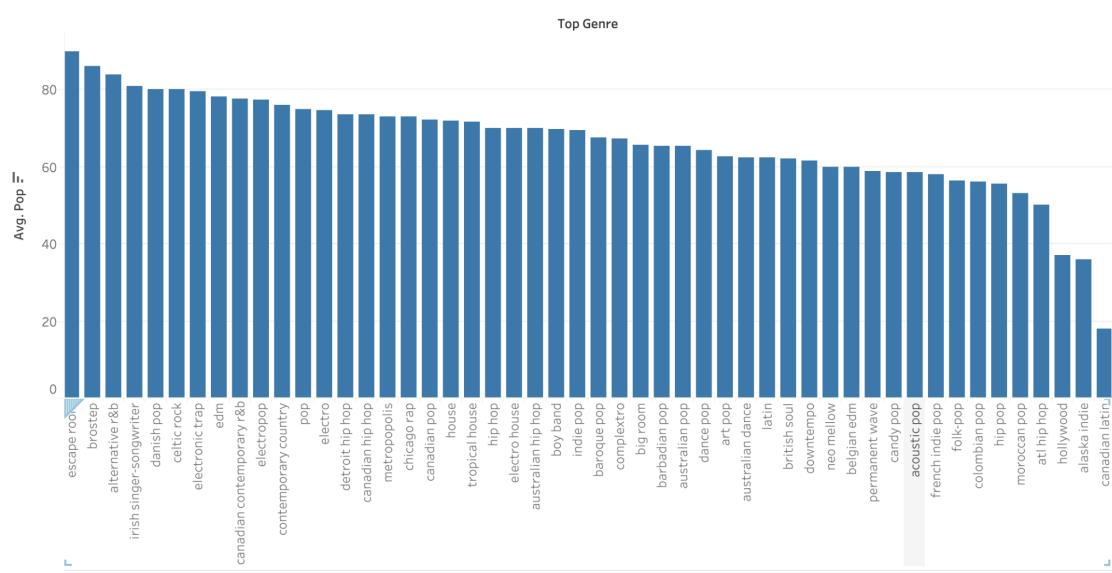
Answer

Plotting BPM values on the y-axis and popularity ratings on the x-axis, the graph shows the relationship between a song's popularity on Spotify and its BPM. At lower popularity scores (0–20), BPM stays constant at first, but it steadily increases from 20 to 50. Between popularity scores of 50 and 70, there is a noticeable increase in heart rate (BPM), which peaks at 70. BPM values drastically decrease after this peak,

suggesting that extremely high BPM may not be popular for long. According to this data, there is an ideal BPM range for ranking highly on Spotify, even if higher BPMs typically correspond with more popularity.

4. Which genre has the highest average popularity?

We created a bar chart using Tableau to show which genre has the most average popularity on Spotify. To ensure accuracy, we gathered and cleansed data on different genres and their popularity scores. We sorted the genres in descending order using Tableau by plotting the genres on the x-axis and their average popularity scores on the y-axis. "Escape Room" is undoubtedly the genre with the highest average popularity, as the bar chart makes evident. We were able to quickly compare genres and determine which was the most popular thanks to this visualisation.



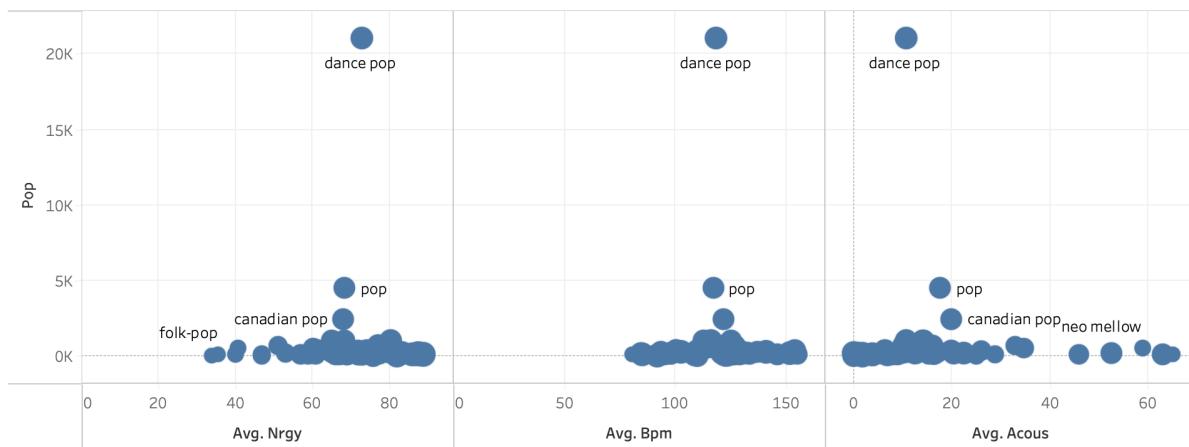
Answer:

"Escape Room" is undoubtedly the genre with the highest average popularity, as the bar chart makes evident. We were able to quickly compare genres and determine which was the most popular thanks to this visualisation.

5. What are the average musical attributes that display the most robust correlation with a song's popularity on Spotify?

The purpose of the investigation was to find the relationship between a song's popularity on Spotify and its musical qualities. To guarantee accuracy, a great deal of care was taken in gathering and cleaning popularity scores as well as features including energy, BPM, and acousticness. To graphically depict these associations, scatter plots were made using Tableau; the bubble size indicated average popularity, the x-axes represented average attribute values, and the y-axis displayed popularity scores. Higher energy and BPM were shown to be favourably connected with popularity, while acousticness was found to be negatively correlated.

What are the average musical attributes that display the most robust correlation with a song's popularity on Spotify?



Answer

The investigation, which made use of Tableau's visualisation tools, found a somewhat positive association between BPM and Spotify song popularity. Dance pop and other genres with higher BPMs have a tendency to be more popular, suggesting a link between faster-paced music and attentive listening. On the other hand, our research also showed that acousticness and popularity had a detrimental relationship. Pop and Canadian pop, two genres with lesser acoustic content, have a tendency to be more popular than high acoustic genres. These findings, which indicate that acousticness has a negative association and energy and BPM have positive correlations, add to our understanding of the fundamental musical characteristics determining song popularity on Spotify.

Question Three: Information presentation and visual design

Website link: <https://ribr221.wixsite.com/rhythm-revealed>

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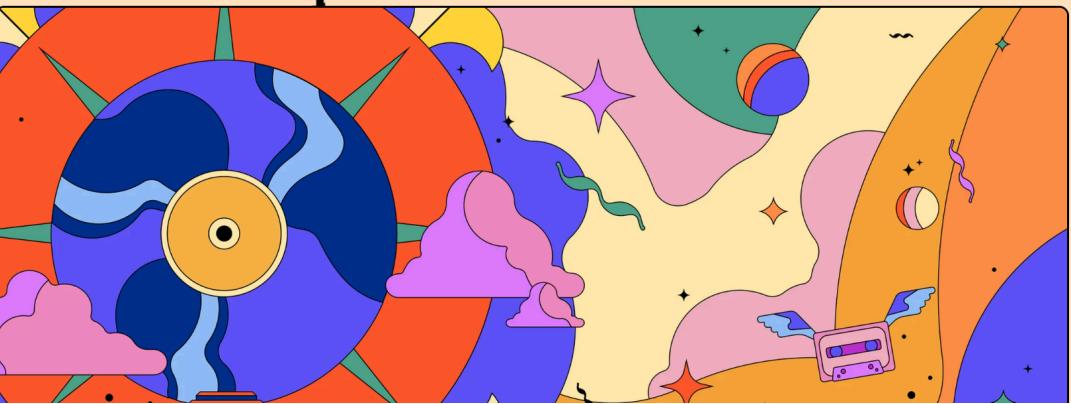
RHYTHM REVEALED

Exploring the Top Spotify Trends

Welcome to Rhythms Revealed - Uncovering the Secrets of Spotify's Top Hits!

Dive into the world of chart-topping music with Rhythms Revealed. We're here to uncover the magic behind the most popular songs of the past decade. Our mission is to analyze and interpret the key elements that make a song a hit—from genre and danceability to tempo and other unique metrics.

Whether you're a music enthusiast or a data geek, Rhythms Revealed is your go-to source for understanding the science behind Spotify's top tracks.



QUESTIONS THAT WE ASKED

QUESTION 1 QUESTION 2 QUESTION 3 QUESTION 4 QUESTION 5

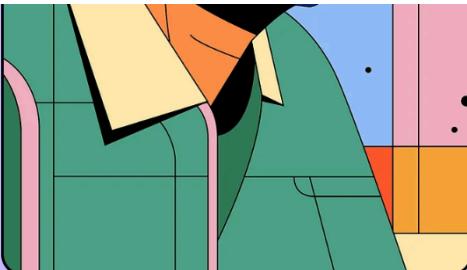
EXCLUSIVE CONTENT

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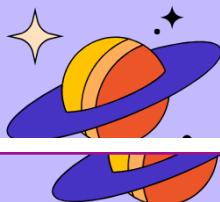
Insights into the World of
Spotify Trends



Dive into exclusive content that decodes the latest Spotify trends. Uncover the stories behind the hits and gain a deeper understanding of



Dive into exclusive content that decodes the latest Spotify trends. Uncover the stories behind the hits and gain a deeper understanding of the music landscape.



QUESTION 1

What is the average duration of top Spotify songs, and how
has it evolved over the past years?

REASON:

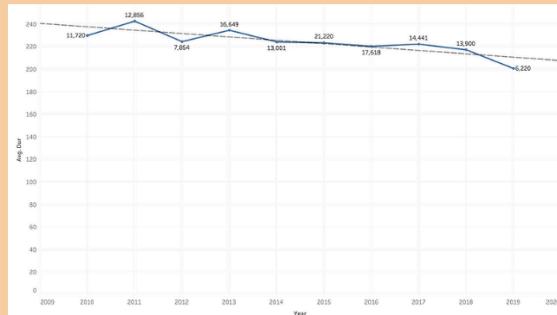
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ANSWER:

We can see that there are a few dips and spikes in the line. This shows that the years 2011 & 2013 had the highest average duration. The line over time fluctuates as it goes up and down.



QUESTIONS 2

What are the most common genres among the top Spotify songs?

REASON

We investigated the common genres among the most popular Spotify tracks using Tableau's line chart visualisation. Through an emphasis on critical variables like "Genre" and "Year," we hope to gain some understanding. We created an engaging story of the prevalence of each genre across time, with the y-axis showing the frequency of each genre and the x-axis denoting "Year". The line chart shows the prominence of each genre within the top Spotify songs, with each point denoting a year. The flowing line provides a nuanced perspective on changing musical trends while gracefully tracing the changes in genre dominance. We were able to identify trends and obtain insights into the most prevalent genres among the top Spotify tracks over a period of time thanks to the line chart's clarity and accuracy.

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ANSWER

The Spotify genres that are the most common are Dance pop, Pop and Canadian pop.



QUESTION 3:

How does the Beats Per Minute (BPM) of a song correlate with its popularity or likelihood to become a top-ranking track on Spotify?

REASON

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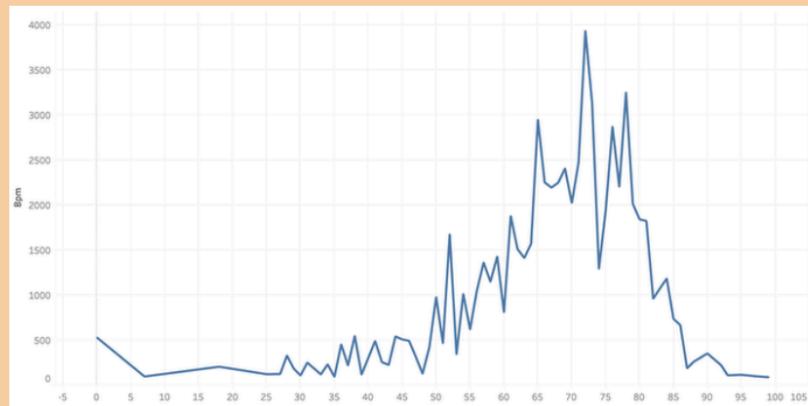
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ANSWER

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QUESTION 4

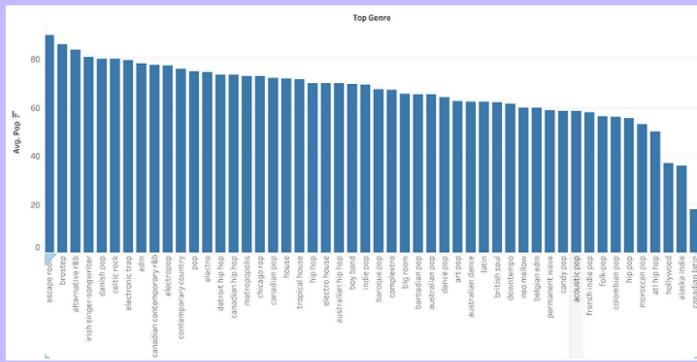
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ANSWER

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QUESTION 5

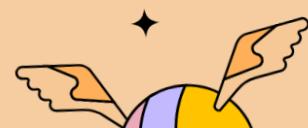
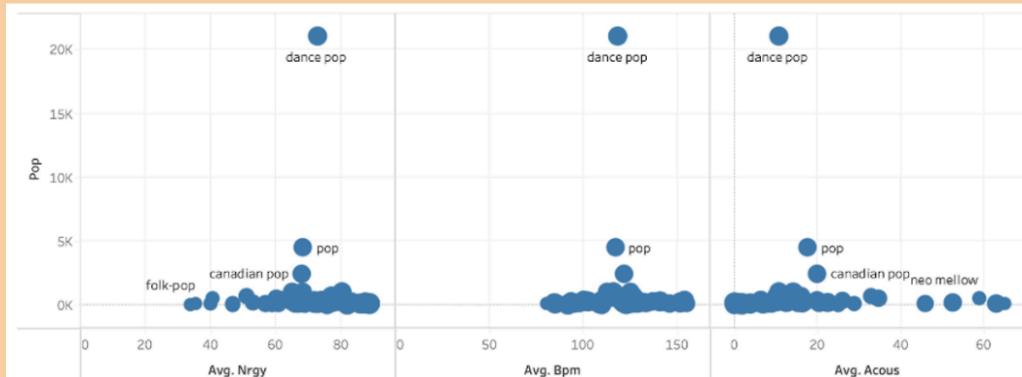
What are the average musical attributes that display the most robust correlation with a song's popularity on Spotify?

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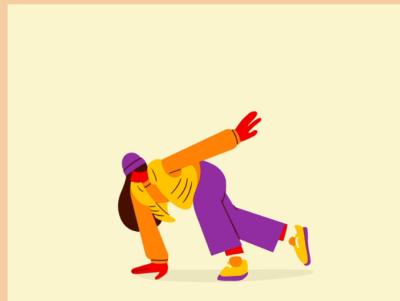
our story

Roda and Suharya, the faces behind Rhythms Revealed, share a deep love for music and a passion for unraveling its mysteries. Their journey began with a simple question: What makes a song a hit? This question sparked a quest to dive deep into Spotify's top hits, analyzing trends and patterns to uncover the secrets behind chart-topping songs. Join Roda and Suharya as they continue to explore the rhythms that move the world.



Meet the team

Roda Ibrahim



- she's a hip-hop dancer
- 2nd year computer science and information management student
- Her favorite song is Fast Car by Tracy Chapman

Suhayra Salad



- she's a ballerina
- 1st year accounting student
- Her favorite song is open arms by sza



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thepopshow@aucklanduni.ac.nz



Contact

Have a question about the music industry or our analysis? Want to share your thoughts on the latest hits? We'd love to hear from you! Whether you're a music enthusiast, a data geek, or simply curious about the rhythms that move the world, feel free to reach out. Your feedback is valuable to us as we continue to explore the secrets behind Spotify's top hits. Get in touch with us using the form below

Let's Chat

Phone Email Social Media

Let's Chat

Phone 123-456-7890 Email thepopshow@aucklanduni.ac.nz Social Media [f](#) [t](#) [in](#) [g](#)

First Name	Last Name	Email *
Message		

Send

Question Four: Discussion for our visual design

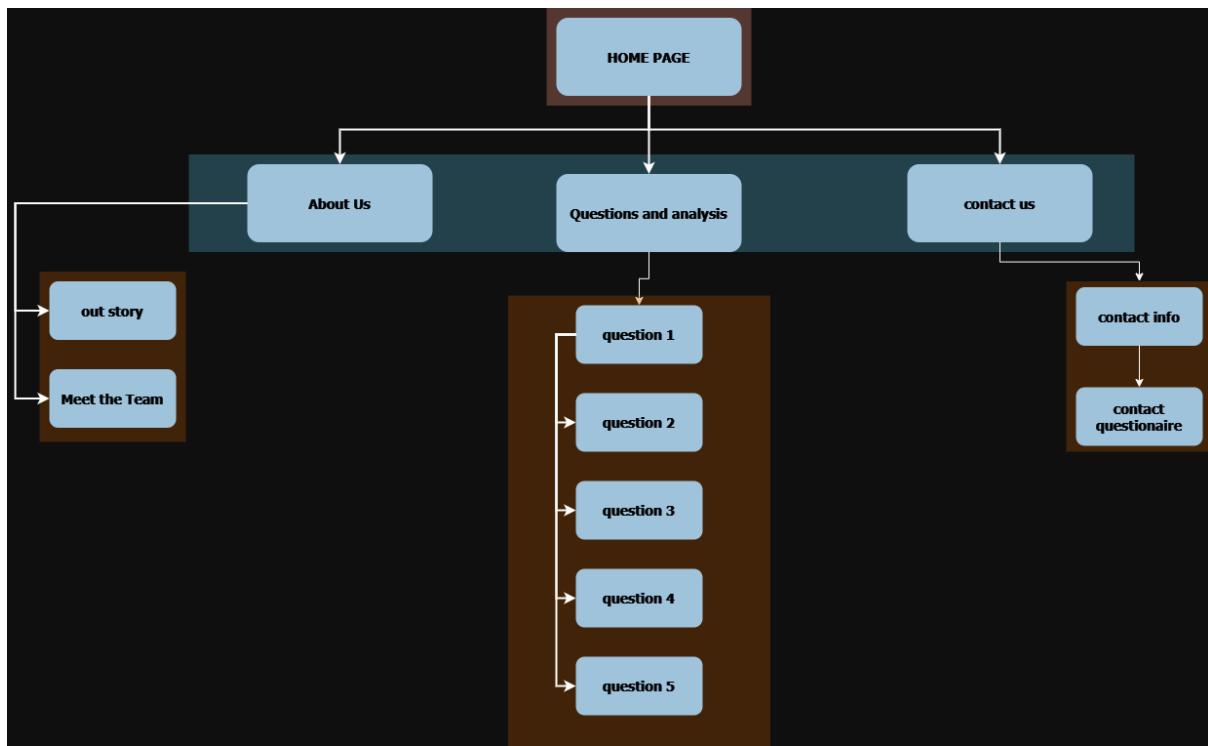
Our target audience

The reason why people visit our website:

The purpose for the people who visit our website can vary depending on who the user is. However, generally, users visiting Rhythms Revealed will have a keen interest in music, Spotify, and top-chart songs.

Our primary target audience is the youth that are passionate music enthusiasts, and are eager to explore the trends and patterns behind their favorite hits. The youth listeners who are curious about what makes a song popular want to know how different sections like genre, danceability, and tempo contribute to the success of a song will find our insights invaluable.

Our site map:



How Our Website Uses Visual Design Principles:

Visual Hierarchy :

1. Contrast in Text and Background:

- Our headlines are bold and in a dark coloured font making it stand out immediately against the cream coloured contrasting background. This draws users' attention to the key messages and main sections of our website. (Team, W)

2. Font Size and Weight:

- Larger and heavier fonts are used for primary headings like the title "Revealed rhythms", while smaller, lighter fonts are used for subheadings and body text. This helps users quickly distinguish between different levels of information.(Bretous, 2023)

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RHYTHM REVEALED

Exploring the Top Spotify Trends

Welcome to Rhythms Revealed - Uncovering the Secrets of Spotify's Top Hits!

Dive into the world of chart-topping music with Rhythms Revealed. We're here to uncover the magic behind the most popular songs of the past decade. Our mission is to analyze and interpret the key elements that make a song a hit—from genre and danceability to tempo and other unique metrics.

Whether you're a music enthusiast or a data geek, Rhythms Revealed is your go-to source for understanding the science behind Spotify's top tracks.

• Listen

EXPLORE

3. Color Contrast:

- We use a vibrant color palette to highlight important features such as the main home page, sections to the questions we asked and etc. we specifically put a lot of color in our home page so that the visitors can feel drawn to the page from the beginning. Team (2024)



4. Spacing and Alignment:

- To avoid everything being cluttered together, we used spacing between sections and consistent alignment of text to create a clean and organized layout. This allows users to scan through content effortlessly and find what they are looking for without feeling overwhelmed

5. Use of Imagery:

- Images strategically placed to complement the text and enhance understanding. Images also create a high visual contrast and often attract the eye first. The images we used include vibrant color to attract the audience's attention. We put the image in the middle of the page where it can stand out more so that visitors understand the vibe and theme of this website which is music.

QUESTIONS THAT WE ASKED

QUESTION 1

QUESTION 2

QUESTION 3

QUESTION 4

QUESTION 5

EXCLUSIVE CONTENT

Insights into the World of
Spotify Trends



Dive into exclusive content that decodes the latest Spotify trends. Uncover the stories behind the hits and gain a deeper understanding of the music landscape.

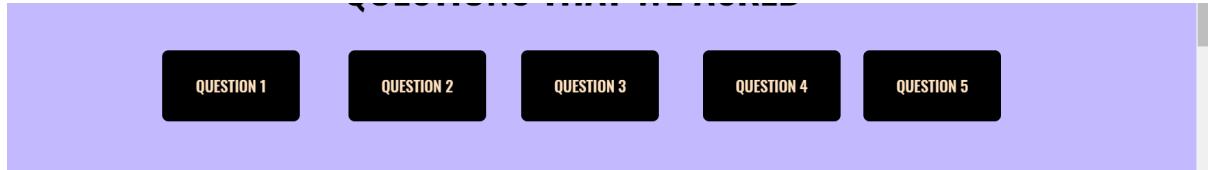
Grouping and Similarity Implementation:

1. Proximity:

- We place related items close together so they are perceived as more connected than items placed further apart. For example, the 5 questions we asked, creating a clear association between them. Additionally, we nest groups of related information within a larger section.

2. White Space:

- Adequate white space is used to separate unrelated items, making each section distinct and easier to focus on. By placing related items closer together and leaving bigger gaps between different sections, we guide users' attention and prevent the page from feeling cluttered. (Bretous, 2023)



3. Borders:

- Borders are employed to visually separate different groups of information. Each section, such as the 5 questions we asked and the header have different borders and we used color as a form of border as well. Separating them with different shades. This not only organizes the content but also adds to the aesthetic appeal of the website.

Usability and accessibility:

We prioritize making our website easy to use. We made sure to have clear navigation menus at the top of the page to help users quickly find sections like "Home," "about us," and "Contact." Our design ensures that visitors can easily explore and understand the content.

By focusing on usability, we aim to provide a smooth and efficient experience for everyone.



Team, W. (2024, June 6). *7 visual hierarchy principles for web design*. Webflow.
<https://webflow.com/blog/visual-hierarchy>

Bretous, M. (2023, June 20). *7 Visual Hierarchy Principles for Every Marketer*. *7 Visual Hierarchy Principles for Every Marketer*. <https://blog.hubspot.com/marketing/visual-hierarchy>

Group Members

- Roda Ibrahim (ribr221)
- Suhayra Salad (ssal814)