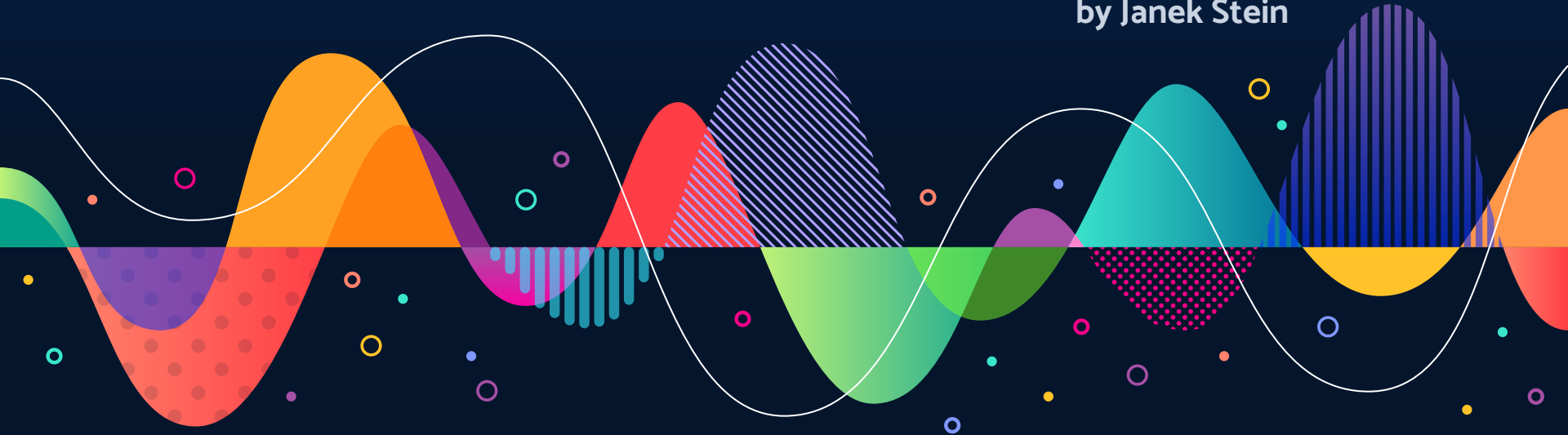


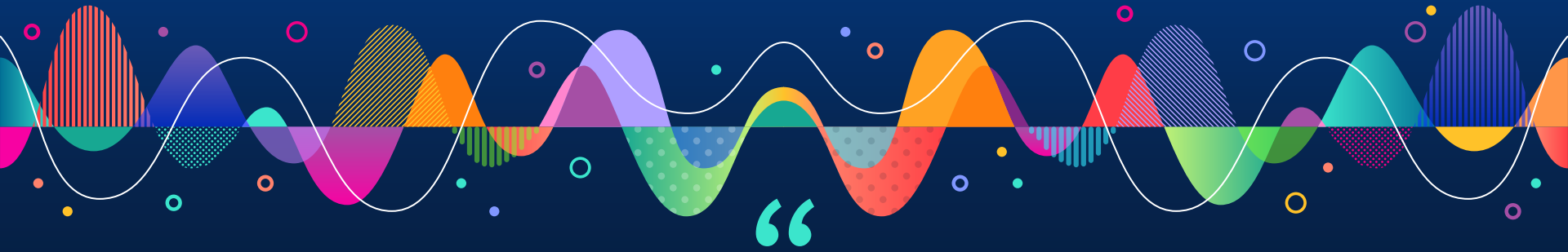
Impact of Corona on Mainstream Music in Germany

by Janek Stein



It is this time of
the year:
2020 Wrapped



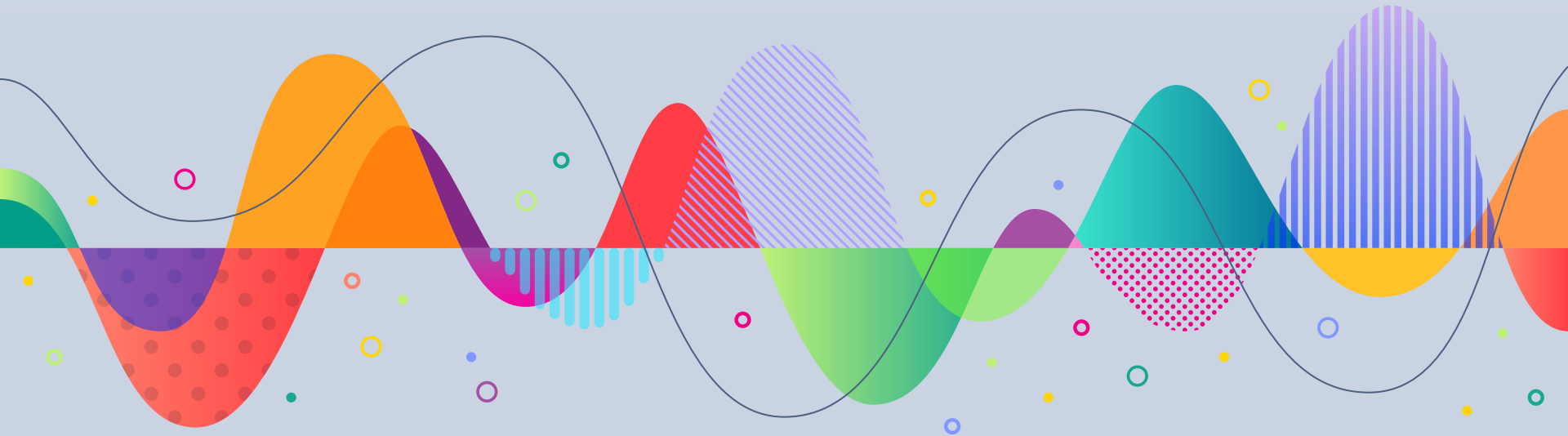


“

Music is the wine that fills the cup of silence.

Robert Fripp,
Guitarist of band “King Crimson”

1. Hypothesis



Hypothesis

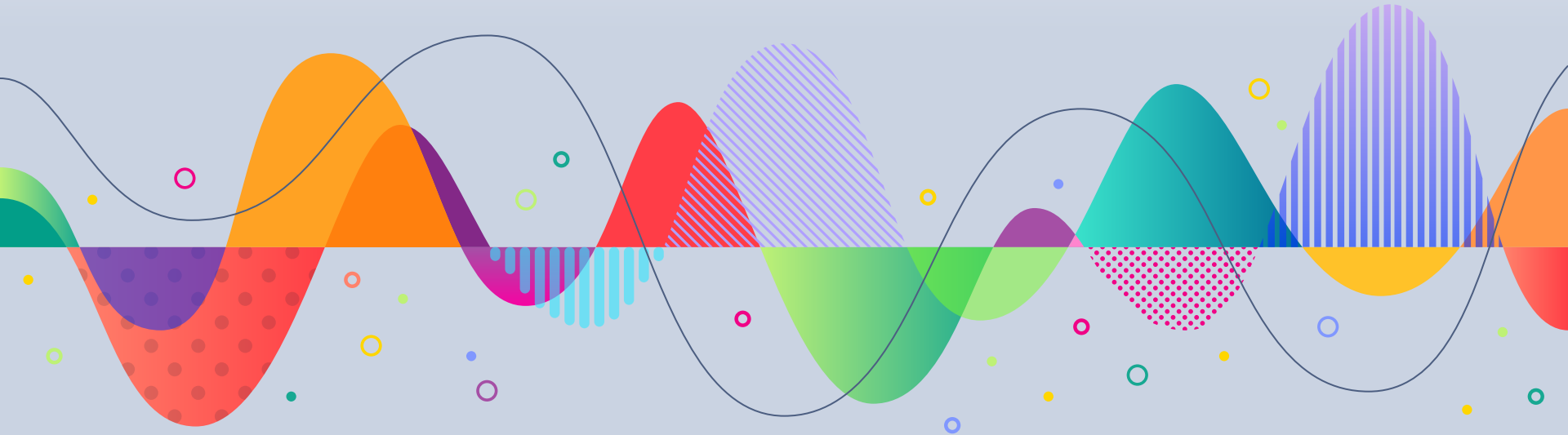


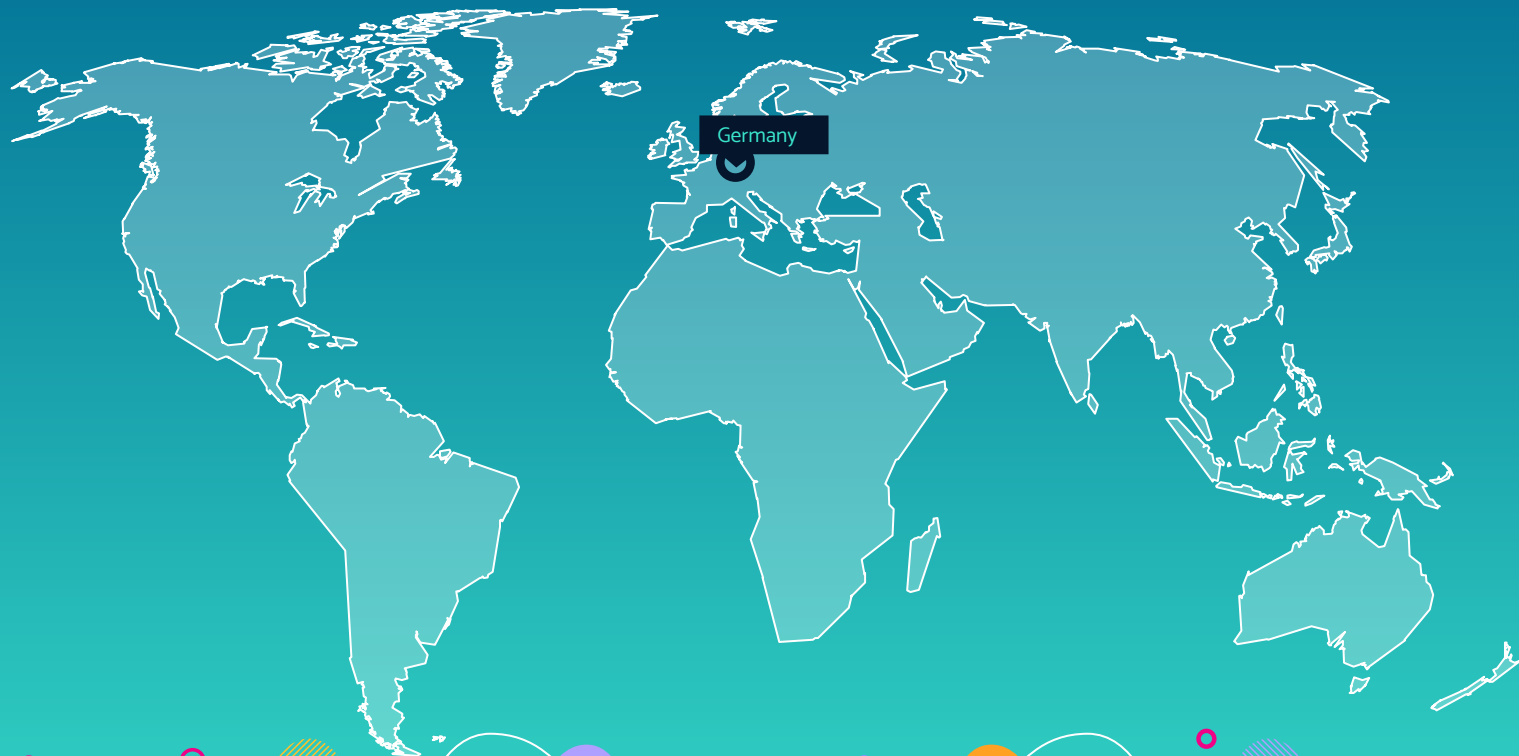
- ▶ Corona has impacted everyone's lives - people stay at home and stores are closed

Hypothesis:

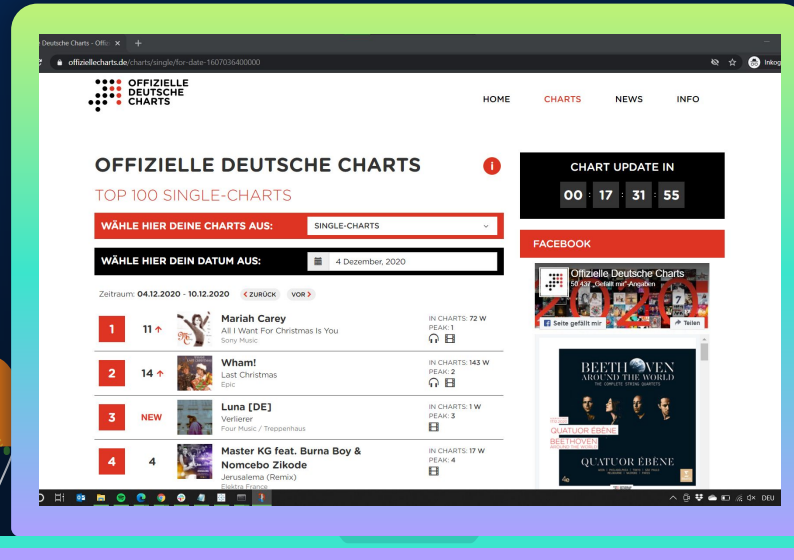
Staying at home has impacted mainstream music

2. DATA SOURCES





Top 100 German Charts

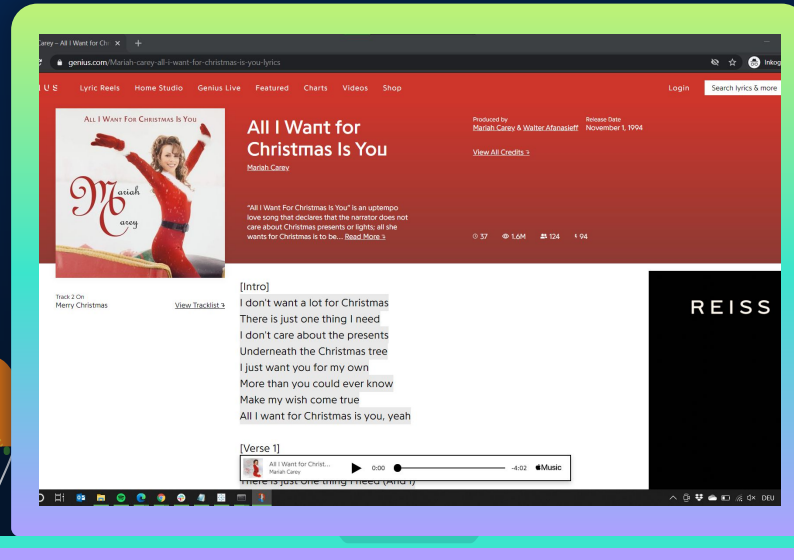


www.offiziellecharts.de

run by



Song Lyrics Genius - API

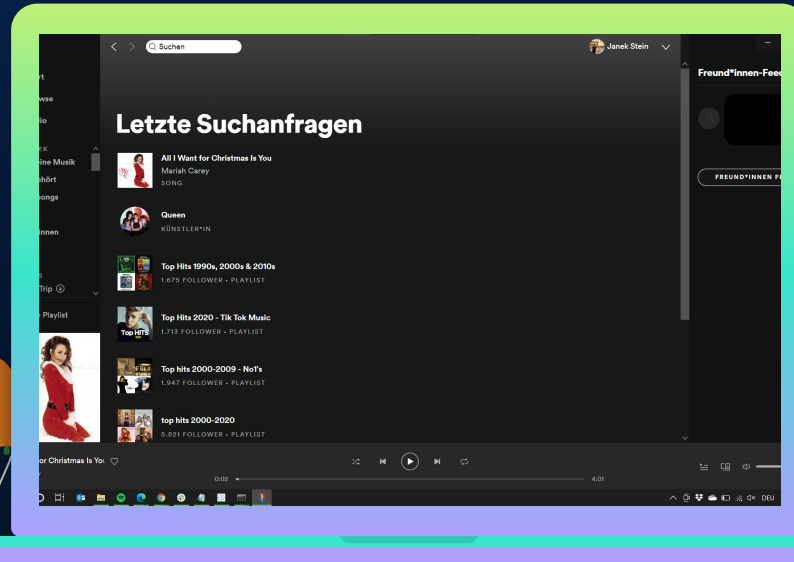


www.genius.com



Audio Features

Spotify API



www.spotify.com



1,868 songs

Released between January 2018 and December 2020 (1st week)

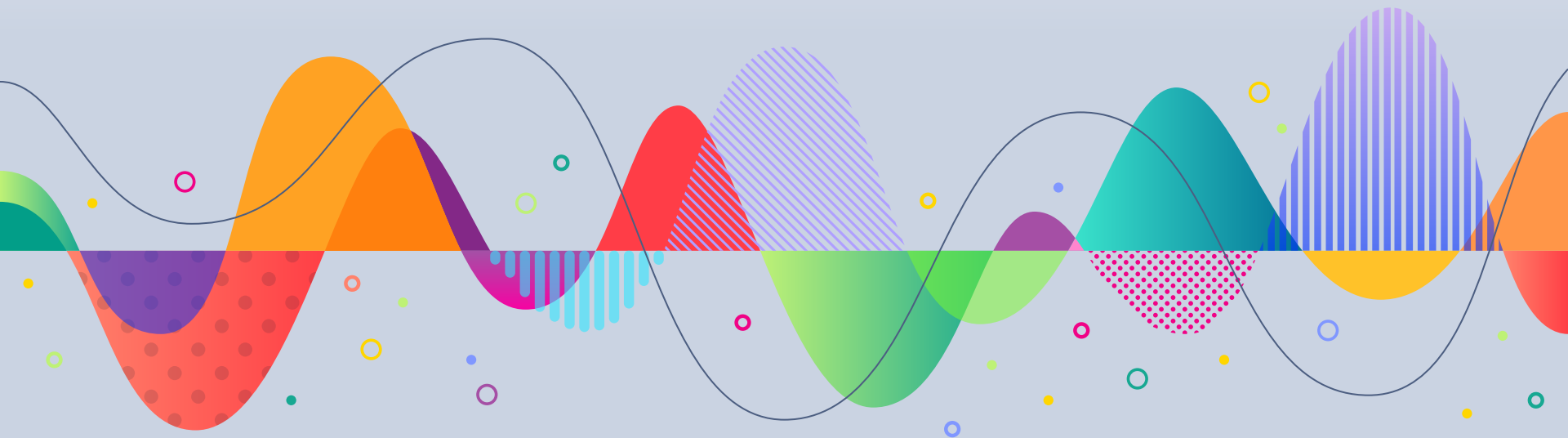
1,755 songs

Released in 2018 - 2020 (excluding December)

1,194 songs

Released in 2019 & 2020 (excluding December)

3. Tools



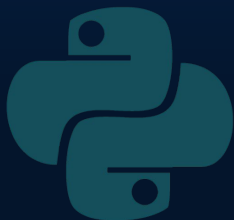
Tools used



pandas



+ a b l e a u[®]



NLTK



NumPy

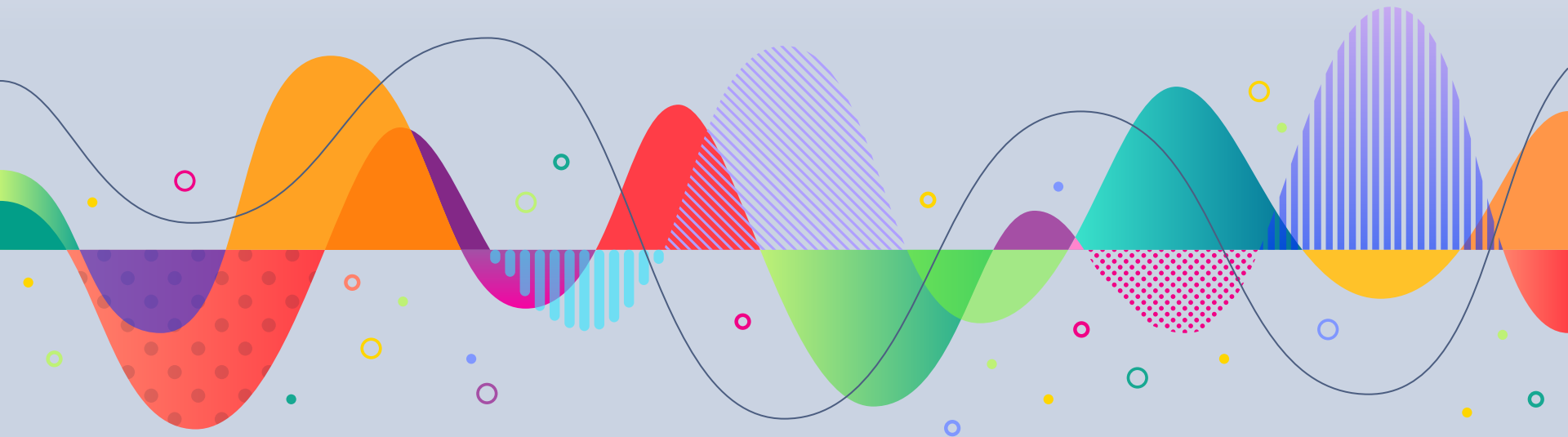


scikit
learn

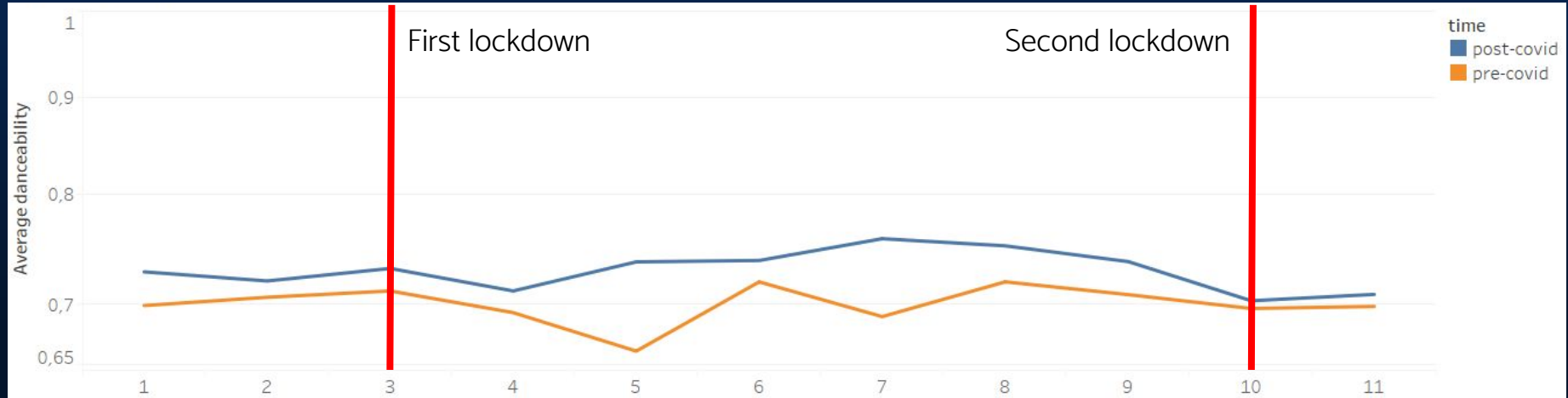
matplotlib



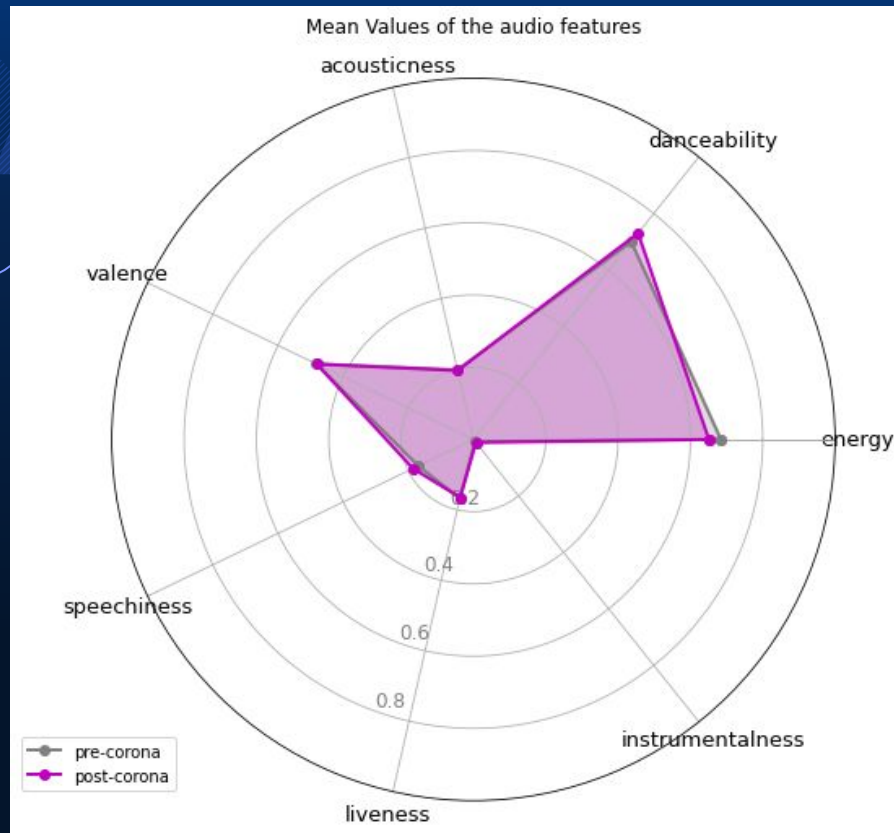
4. AUDIO FEATURES



Development of features over time (example)

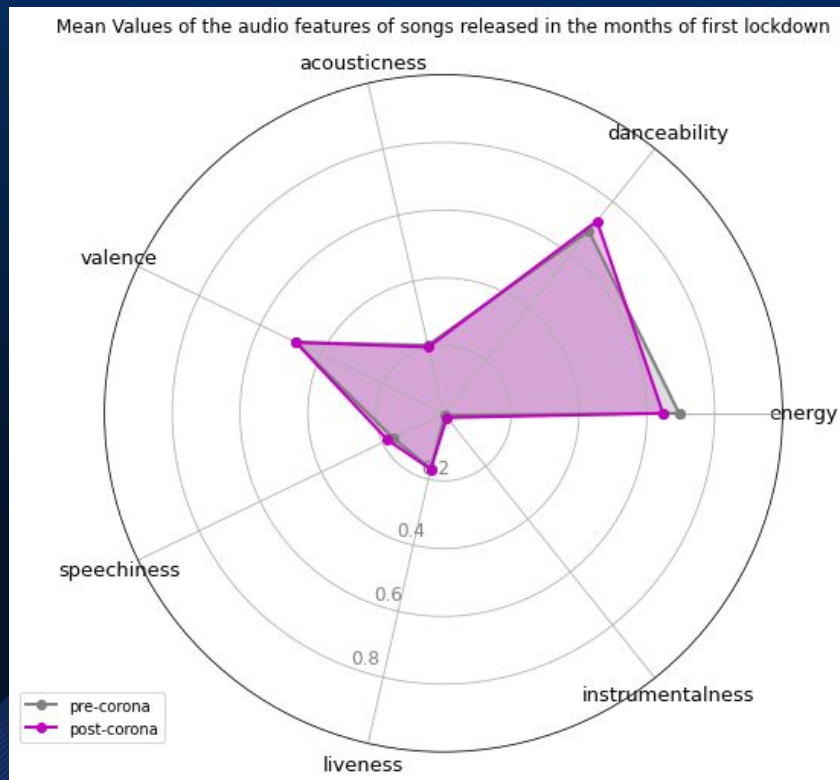


Danceability over the year

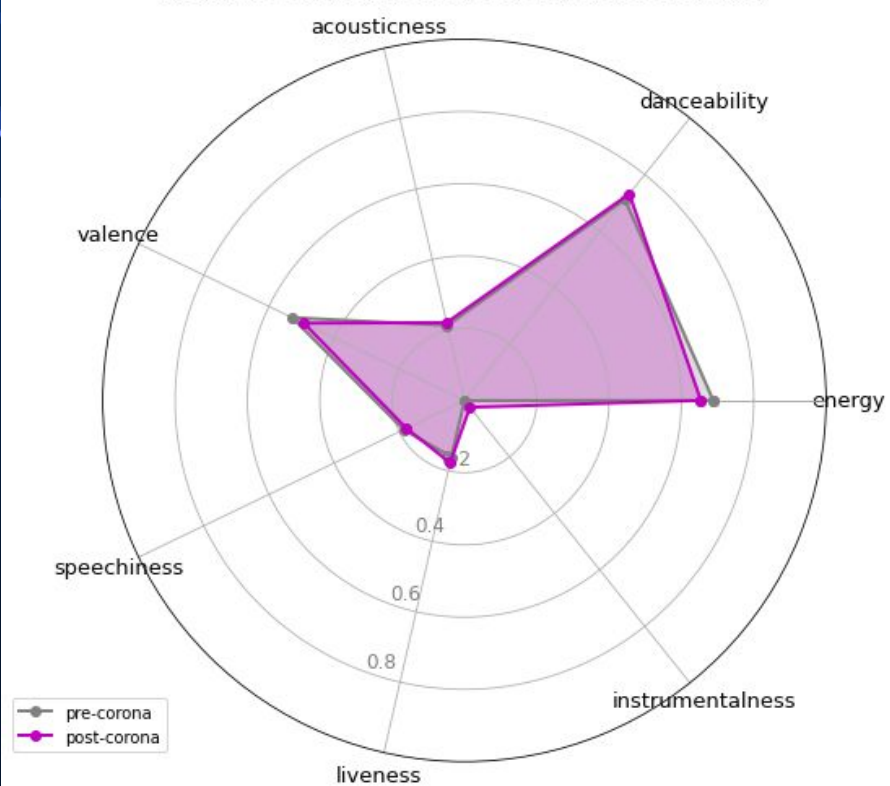


Comparison of audio features by year (January - November)

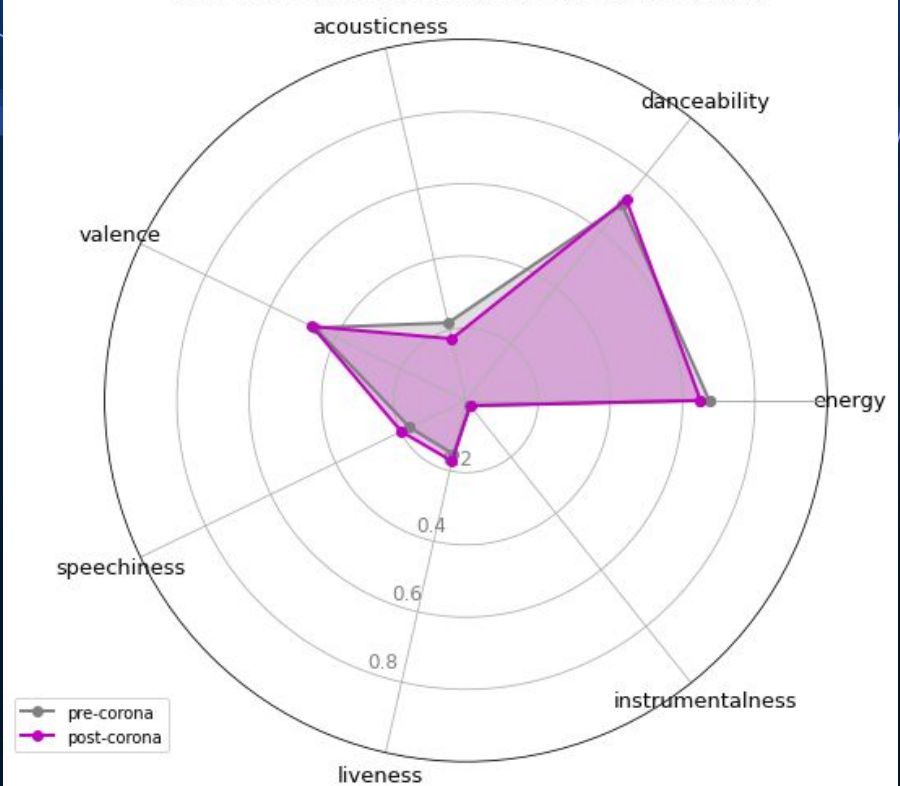
Months of First Lockdown



Mean Values of the audio features of songs released in March

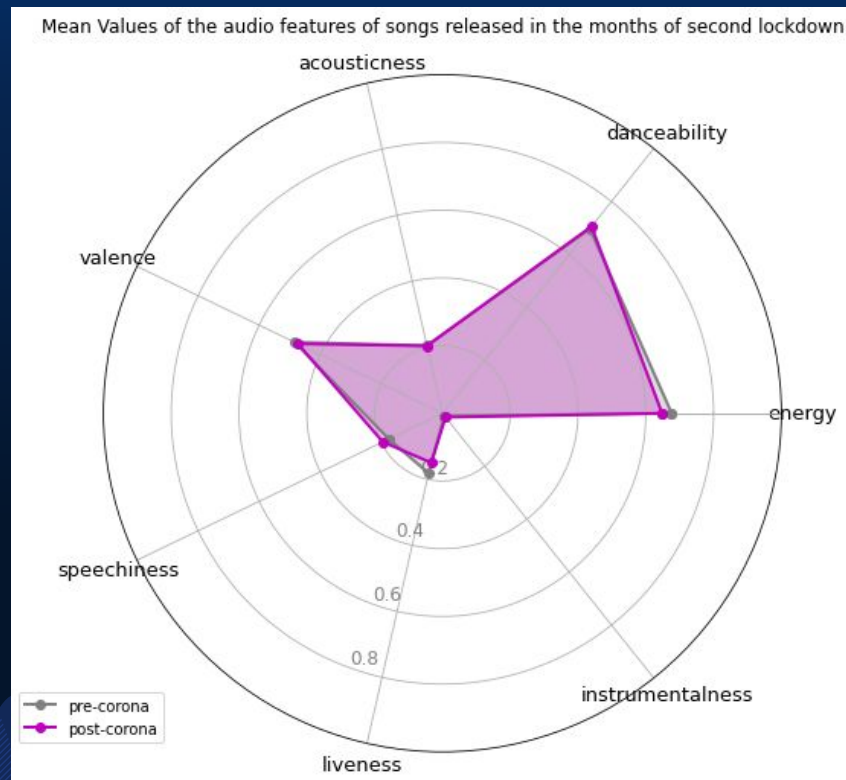


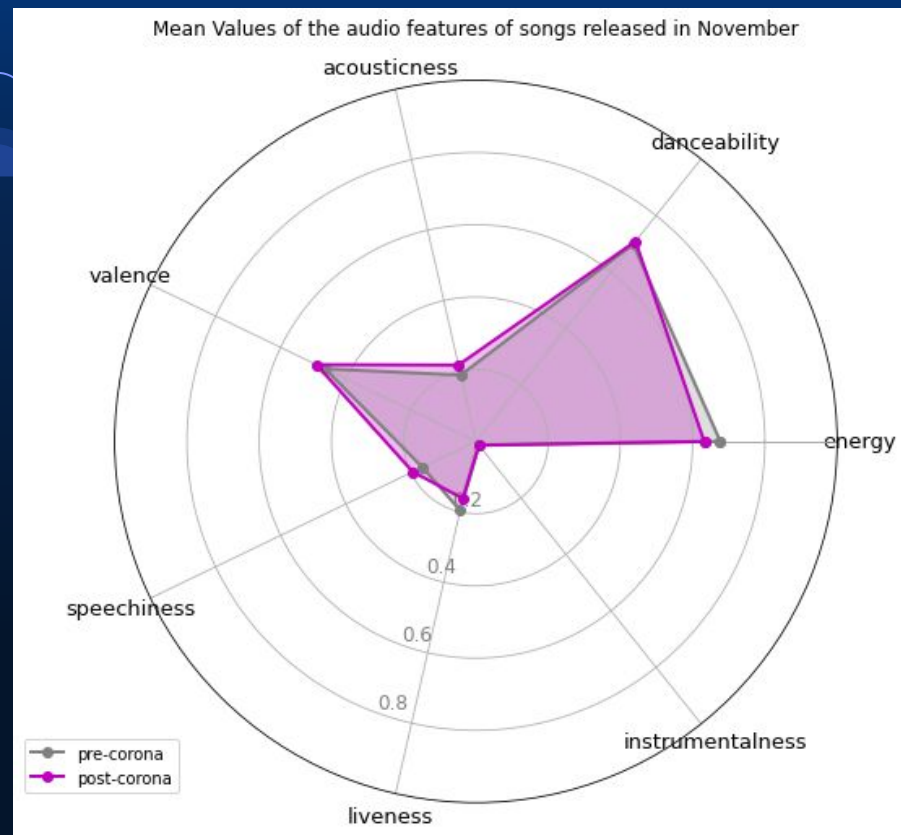
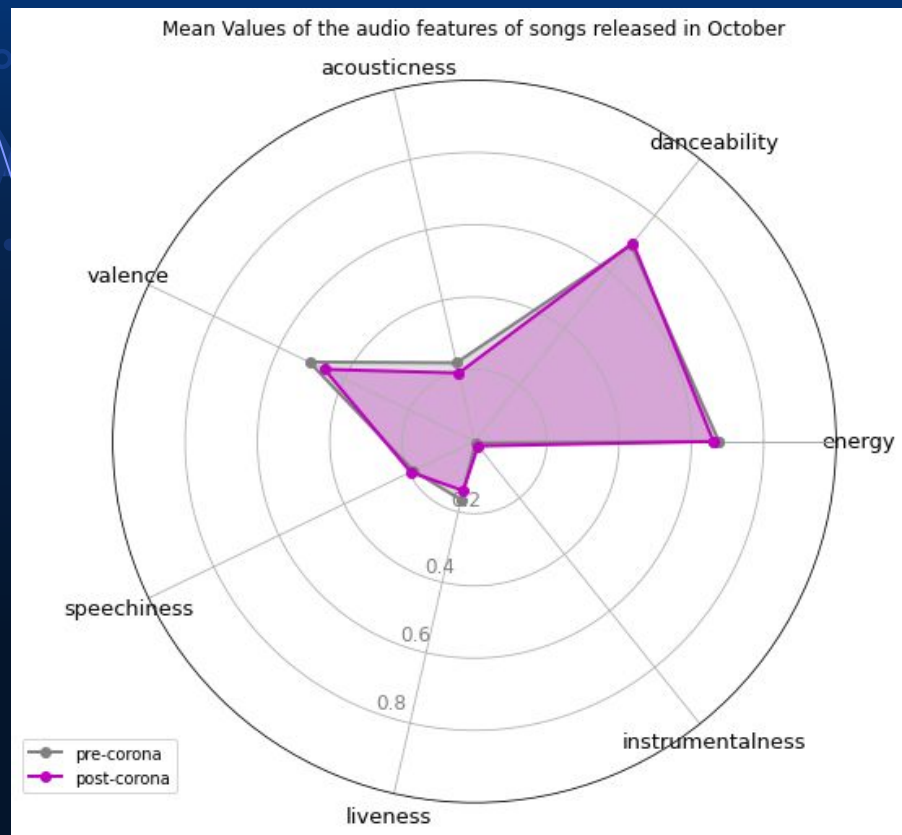
Mean Values of the audio features of songs released in April



Comparison of audio features by Months March & April

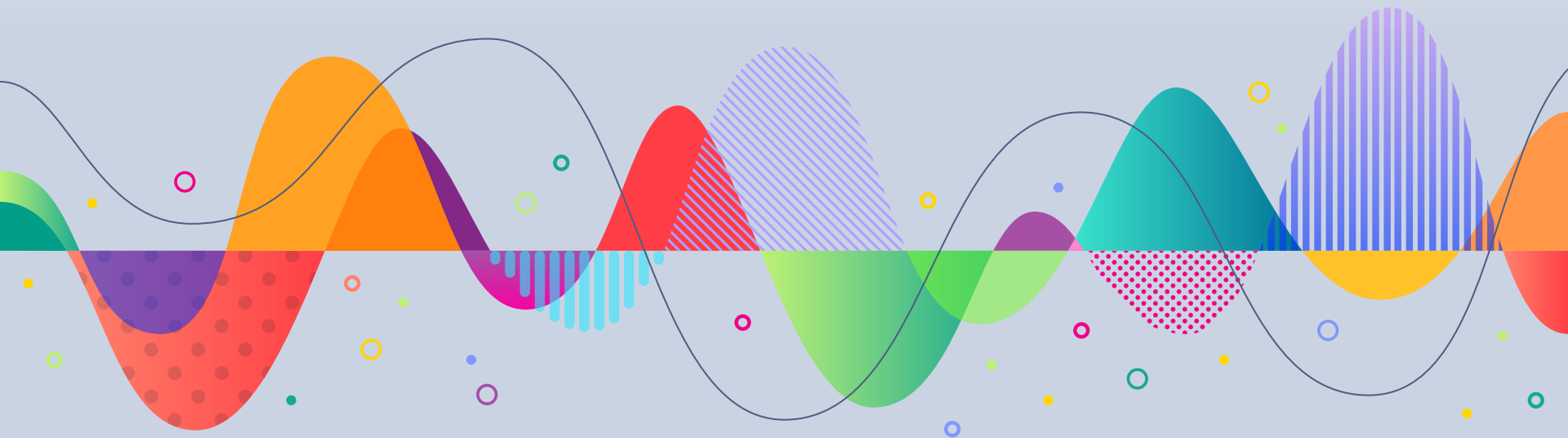
Months of Second Lockdown



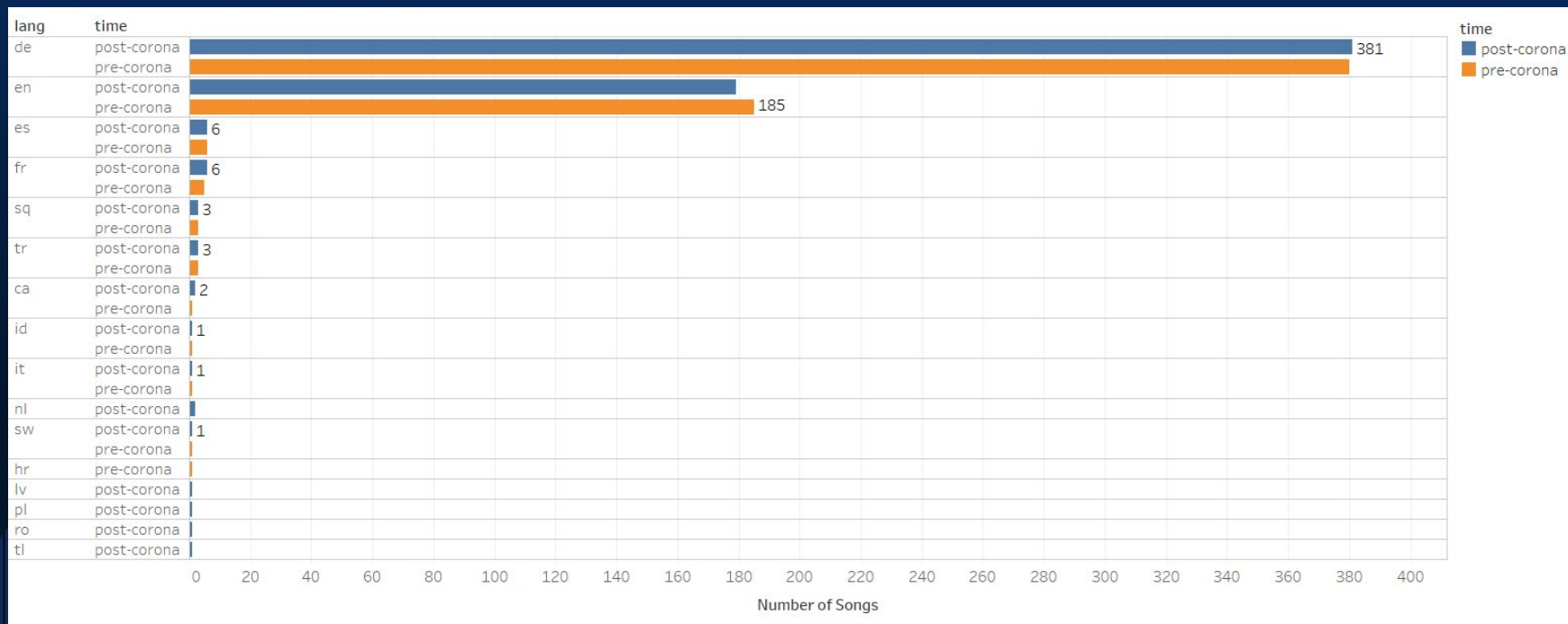


Comparison of audio features by Months October & November

5. LYRICS

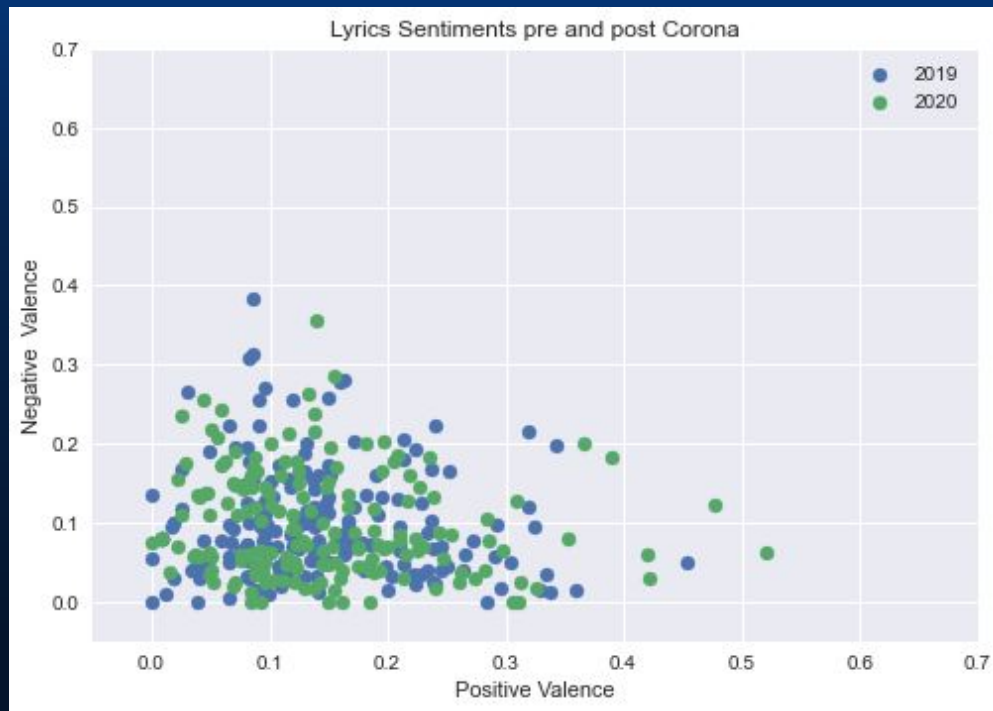


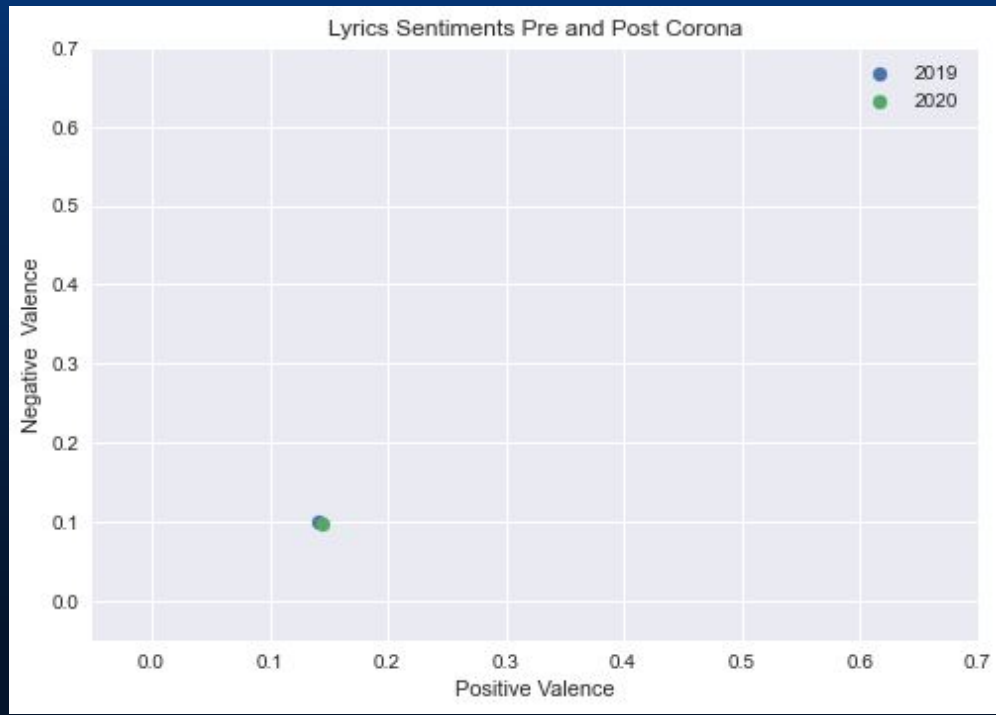
Language Distribution Comparison



Sentiment Analysis (en)

- Generally slightly higher spread of data on the positive valence

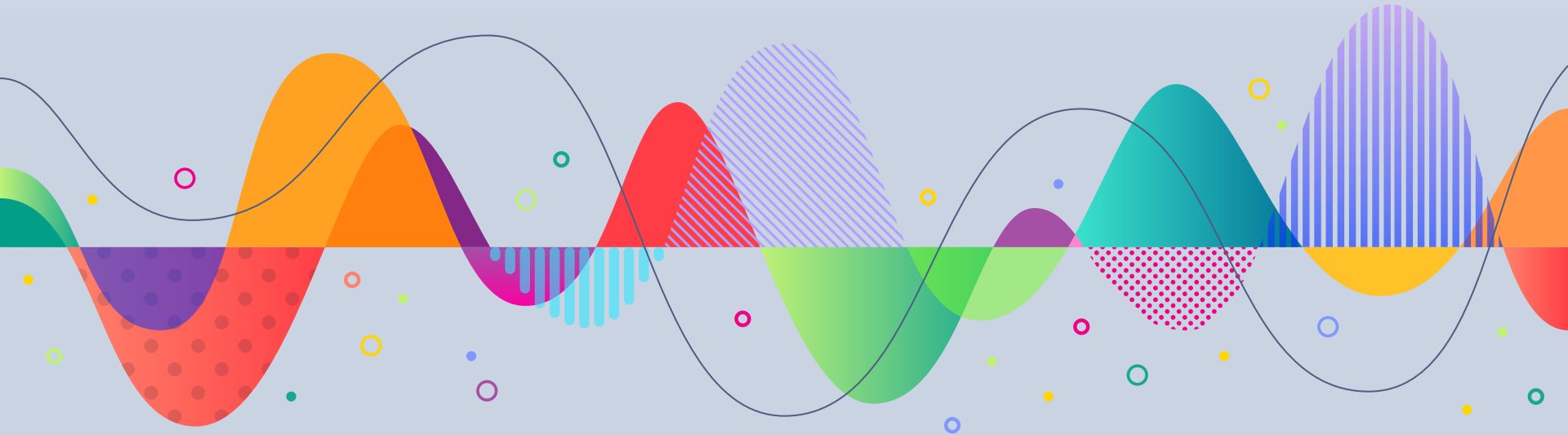




Sentiment Analysis (en)

- Overall, the sentiment of mainstream music has not changed

6. CONCLUSION



Conclusion



Hypothesis:

Corona has an impact on Mainstream Music in Germany

- ▷ Audio features
- ▷ Language of lyrics
- ▷ Sentiment of lyrics



Do not show a
significant change



Next steps & Learnings



- ▷ Extent sentiment analysis to German songs
- ▷ More interesting: looking at individual streaming behavior instead of using aggregate data
- ▷ Beware of using different data sources
- ▷ Don't underestimate working with different languages

Any questions?



Janek Stein

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My work can be found on GitHub: **@jast92**

THANKS!



Acknowledgement



For my work I have used information from the following authors:

Cristobal Veas:

[How to Analyze Emotions and Words of the Lyrics From your Favorite Music Artist | by Cristobal Veas | Towards Data Science](#)

Jonathan Cabreira:

<https://towardsdatascience.com/a-music-taste-analysis-using-spotify-api-and-python-e52d186db5fc>

- ▷ Presentation template by [SlidesCarnival](#)
- ▷ Photographs by [Unsplash](#)