

Popular Music Analysis

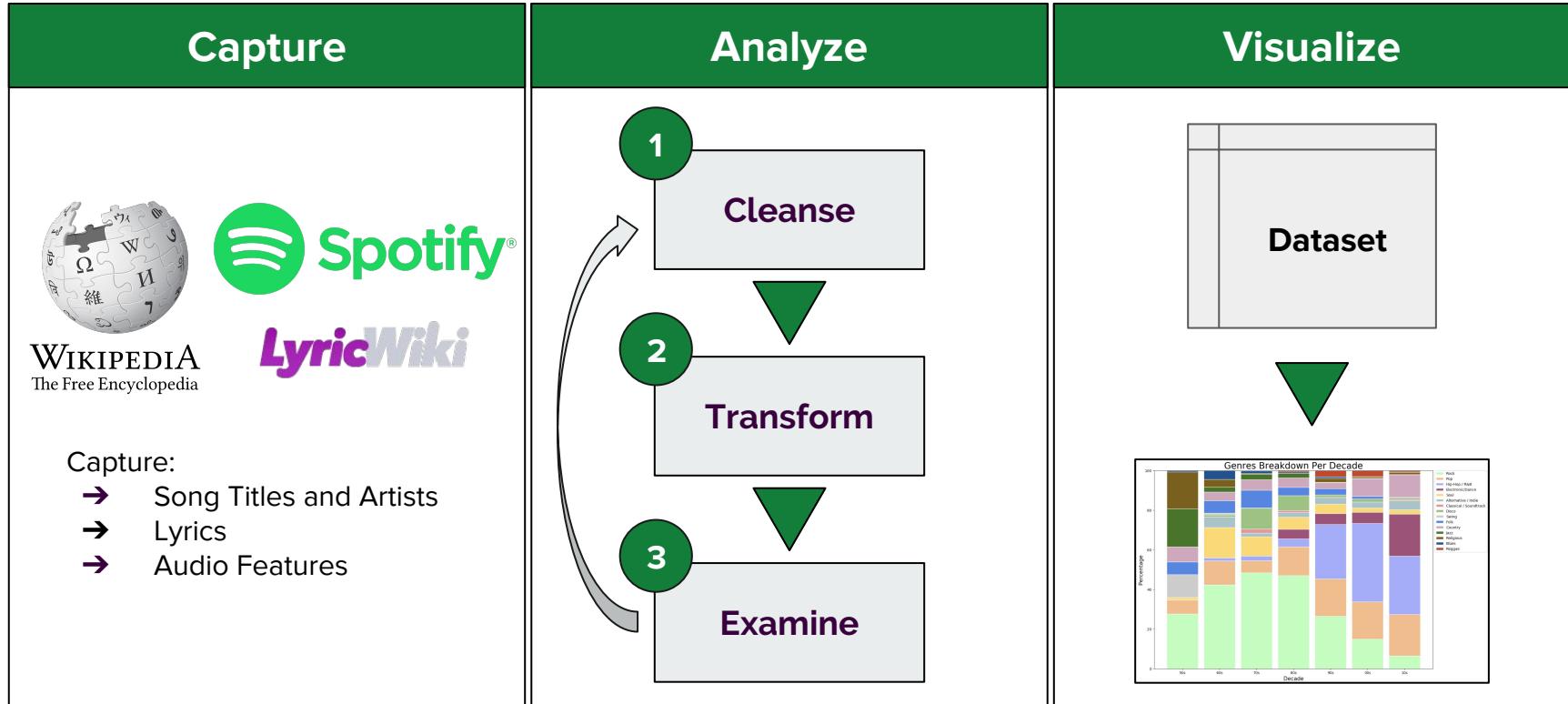
Steven Au-Yeung
December 13, 2018

Purpose

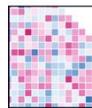
Discover **trends** for popular music between 1950 to 2018



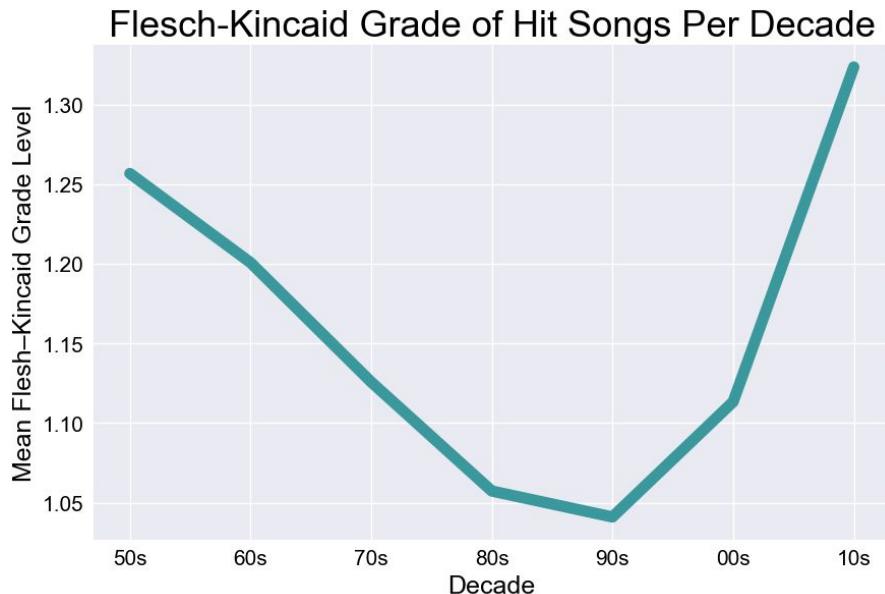
Approach



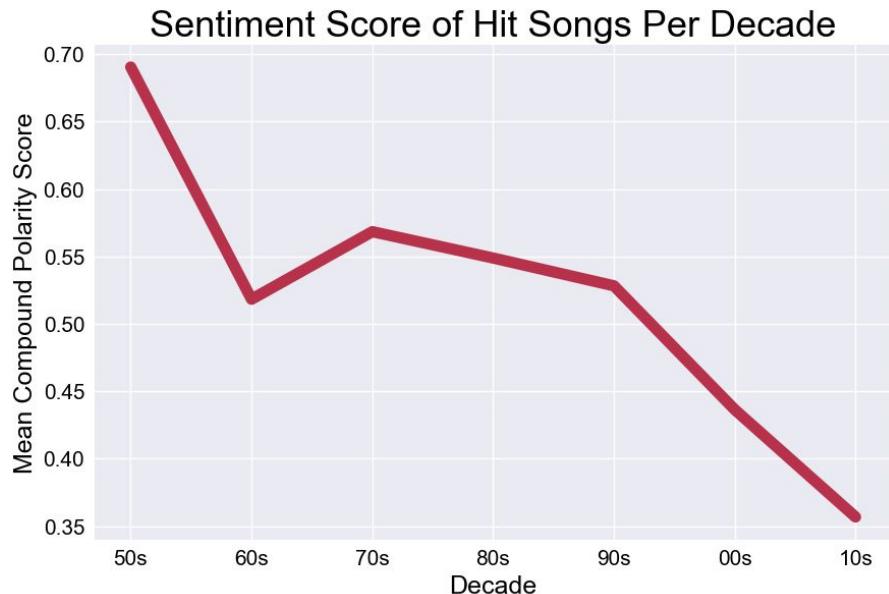
Tools

Tools	Purpose
 LyricWiki	<ul style="list-style-type: none">• Data Querying
  $y_{it} = \beta' x_{it} + \mu_i + \epsilon_{it}$ 	<ul style="list-style-type: none">• Data Analysis• Text Pre-Processing• NLP
    	<ul style="list-style-type: none">• Data Visualization• Web App

Music Over The Last 70 Years



Pre 1990s: song complexity **DECREASING**
Post 1990s: song complexity **INCREASING**

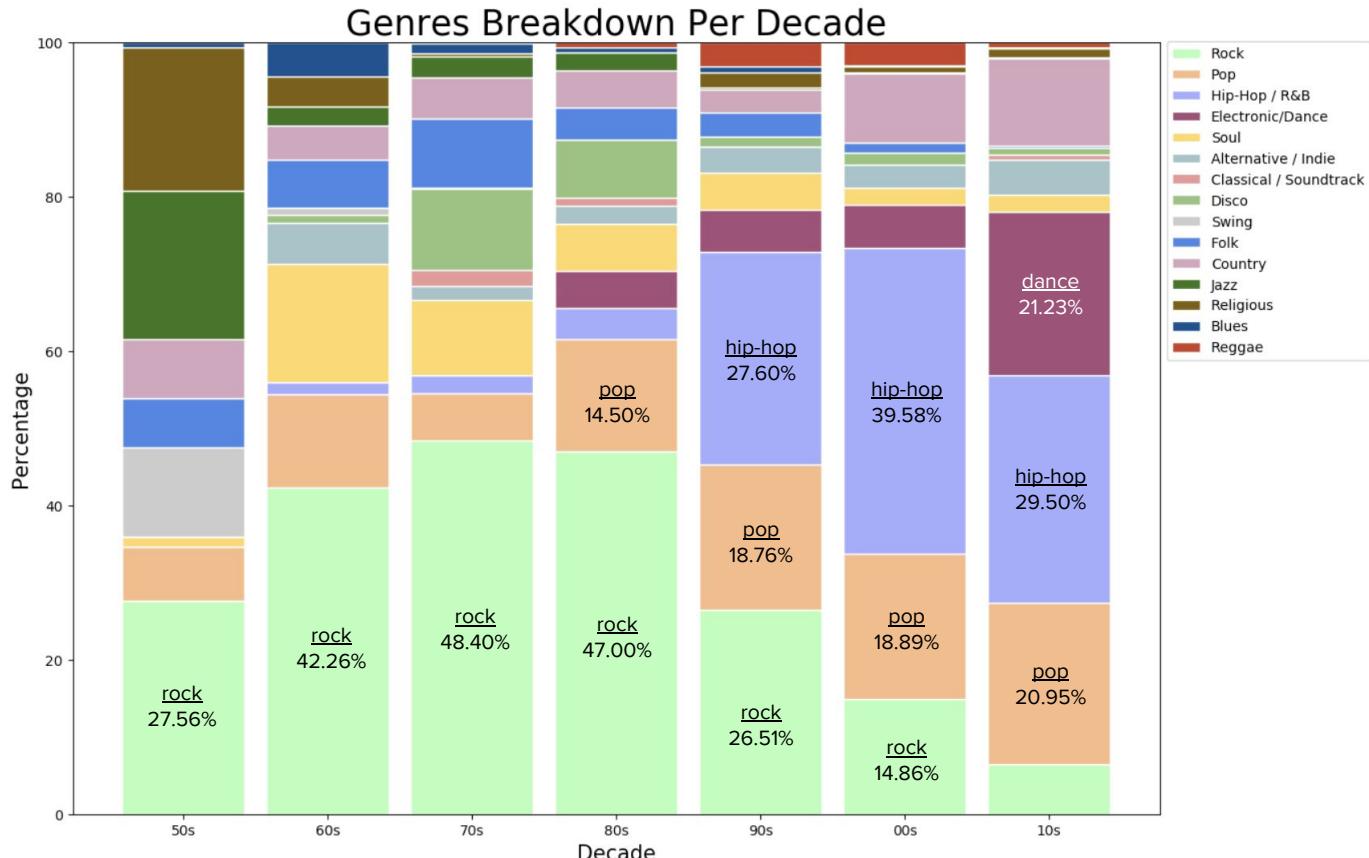


Songs are getting **ANGRIER!** >:[

Genre Representation

Pre 1990s:
Rock bands
represented the
Billboard charts
majority genre

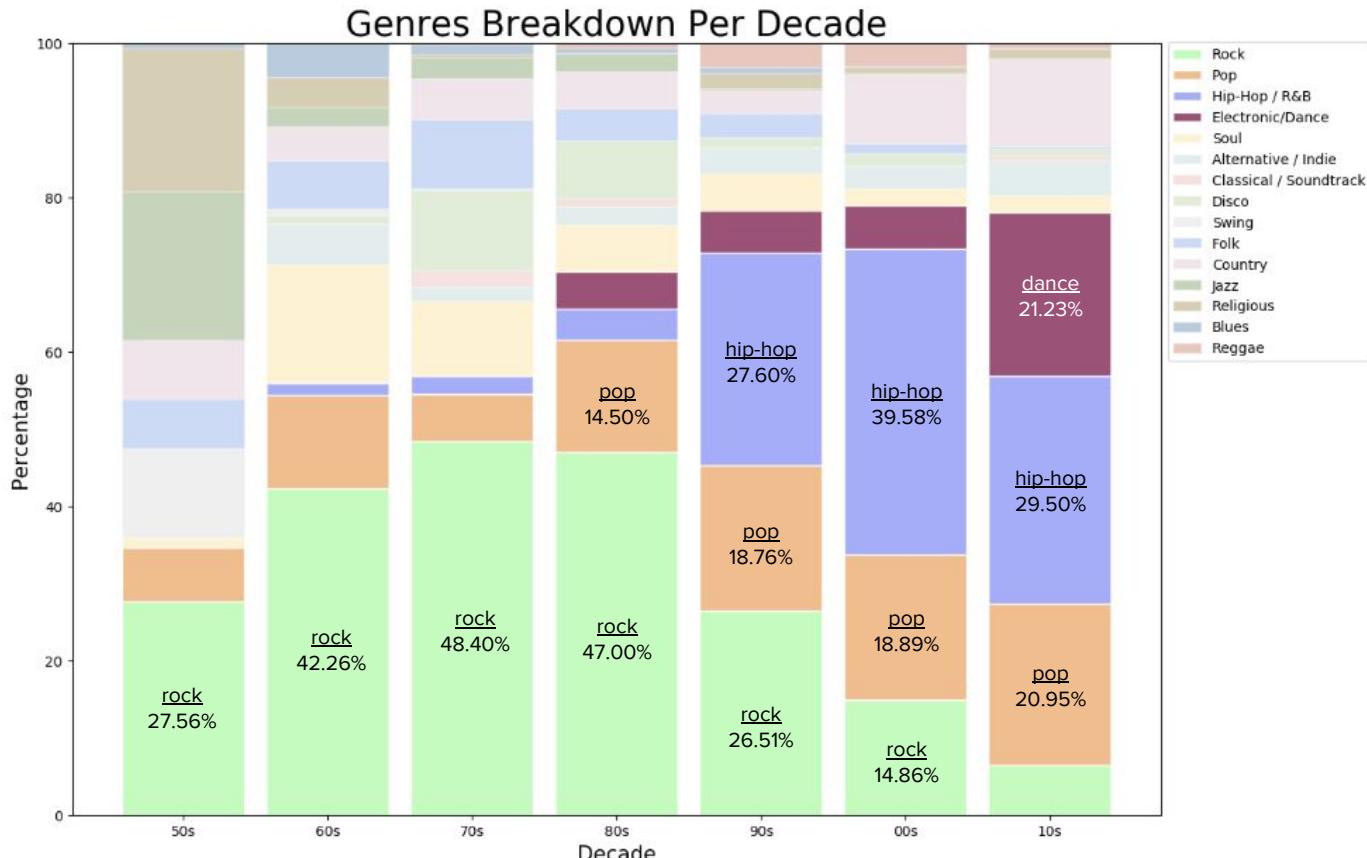
Post 1990s: Uprising of Pop, Hip-Hop, and Electronic Dance music



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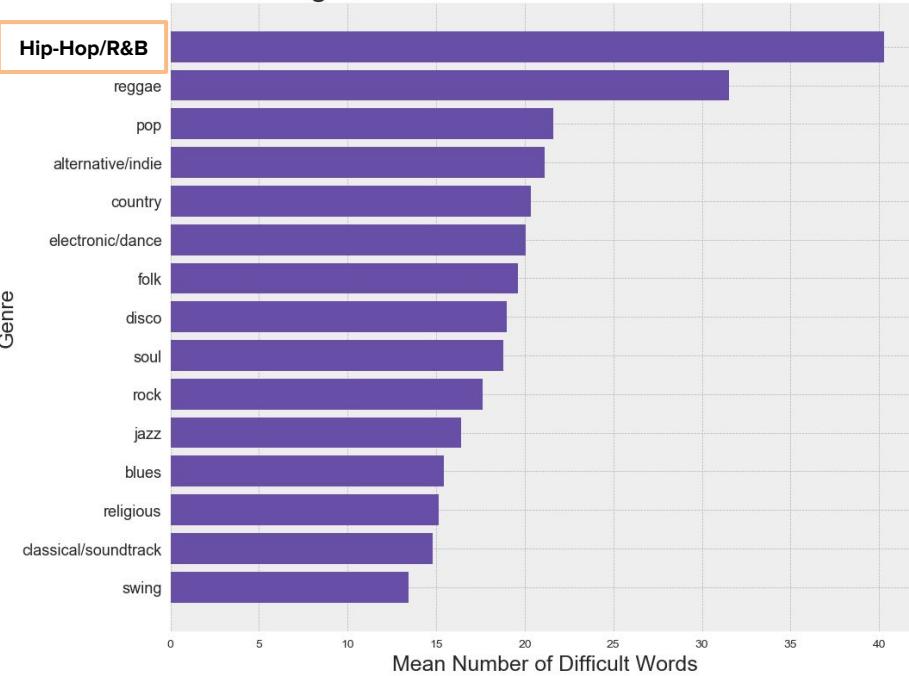
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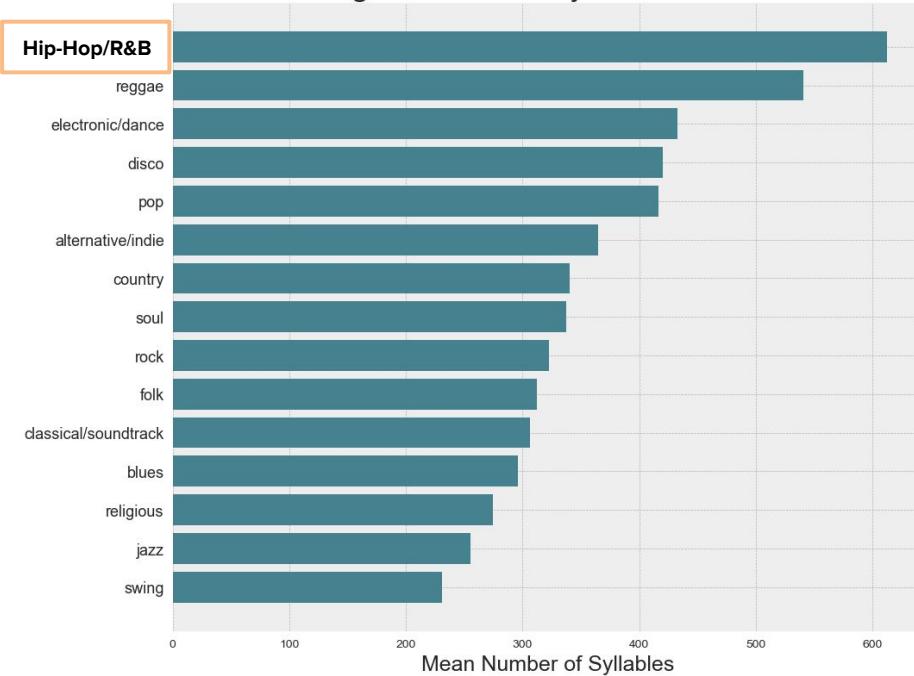


The Rise of Hip-Hop and R&B

Average Number of Difficult Words Per Genre



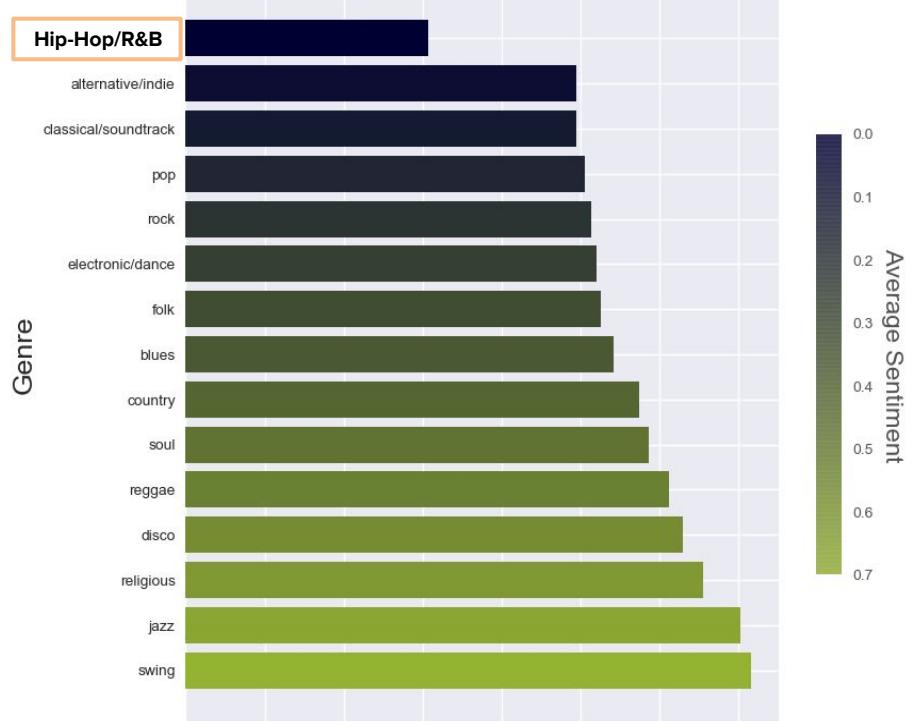
Average Number of Syllables Per Genre



Rise of Hip-Hop and R&B **increased** song lyrics complexity post 1990s

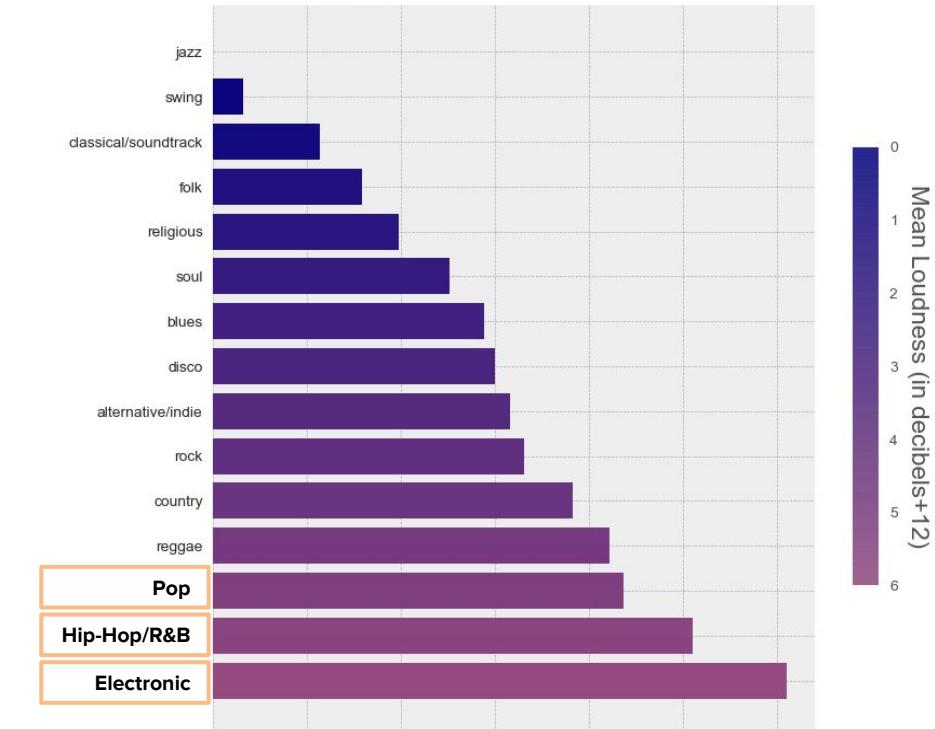
Other Trends

Average Sentiment Per Genre



Hip-Hop songs are **less positive** than other genres

Average 'Loudness' Per Genre



People enjoy **LOUD** music

Consistent Song Topics

WordCloud for Song Lyrics from 1950 - 1989

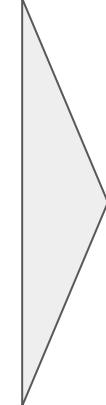
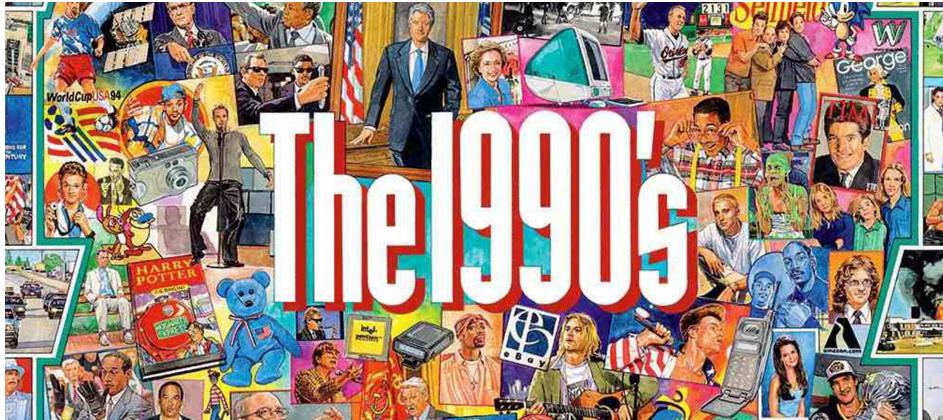


WordCloud for Song Lyrics from 1990 - 2018



Conclusion

In summary...

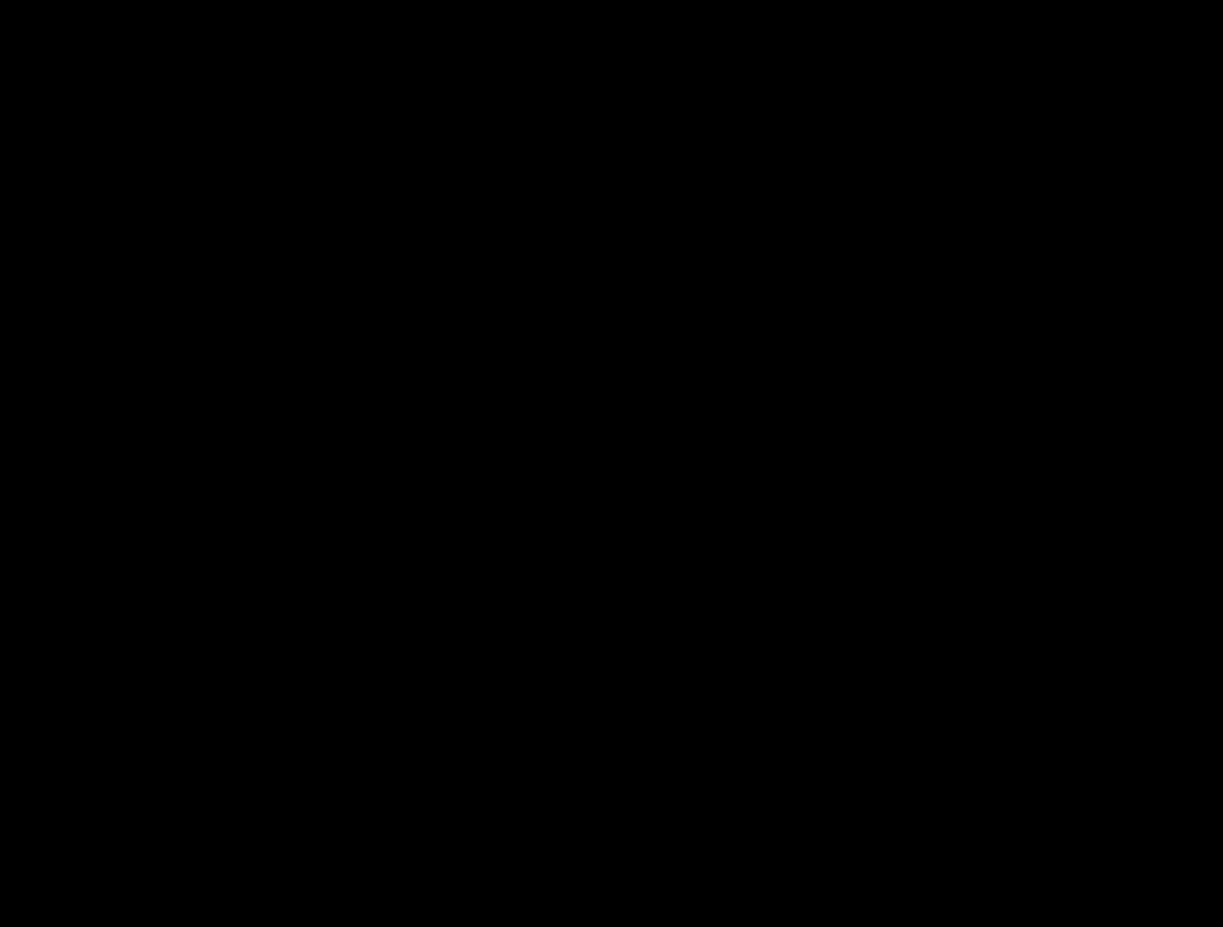


Song Features

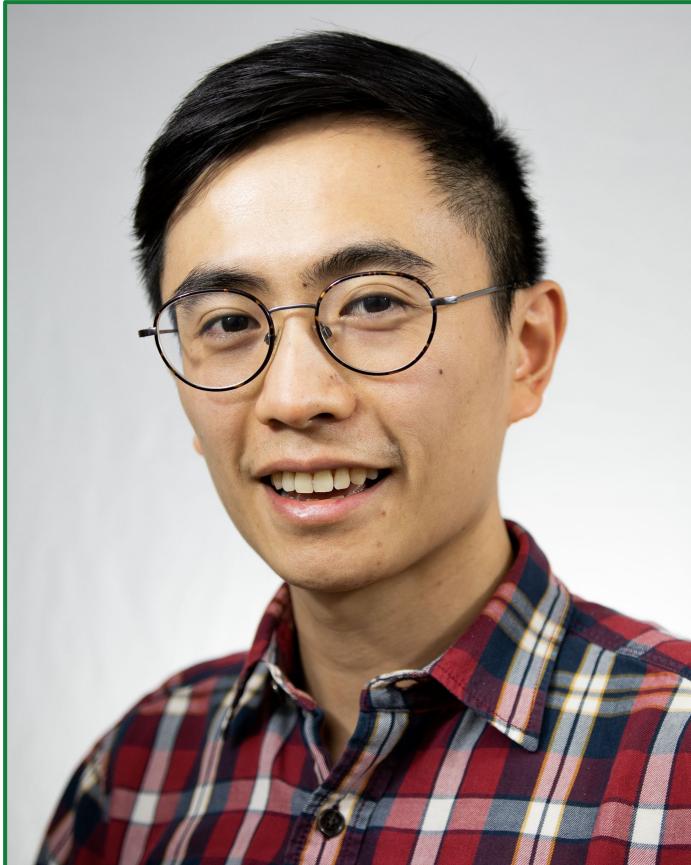
- Word Count
- Difficult Words
- Speechiness
- Loudness
- Sentiment



Billboard Hot 100 Recommender



Thanks!



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Data Scientist



/stevay



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