CHORDIFY

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Are you a song writer?

You are now!

With Chordify, anyone who can write English words can compose a song!

How Chordify works:

1   Enter your favorite words or phrases into the custom interface.

2   The system returns appropriate chord suggestions.

3   Take the suggested chords, apply your custom tempo and instrumentation, and write a killer song using your own words!

What are you saying?

- Common songs in a minor key:
  - Led Zeppelin: Stairway to Heaven (Am)
  - The Animals: House of the Rising Sun (Am)
  - Neil Young: Heart of Gold (Em)

Oh! Now you have my attention...

Songs with key changes:
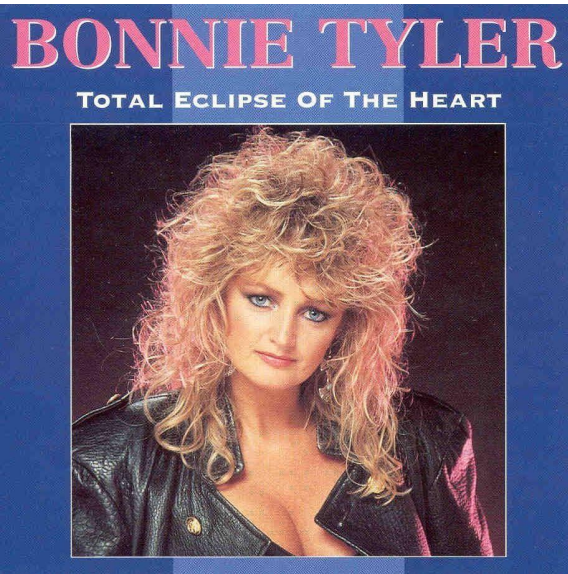
- Sisqo: The Thong Song
- Belinkie: Build Me Up, Buttercup
- Jimmy Ruffin: What Becomes of the Broken-Hearted?
- Bonnie Lee Tyler: Total Eclipse of the Heart
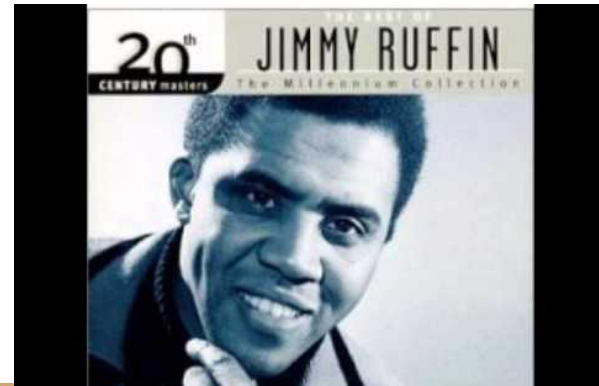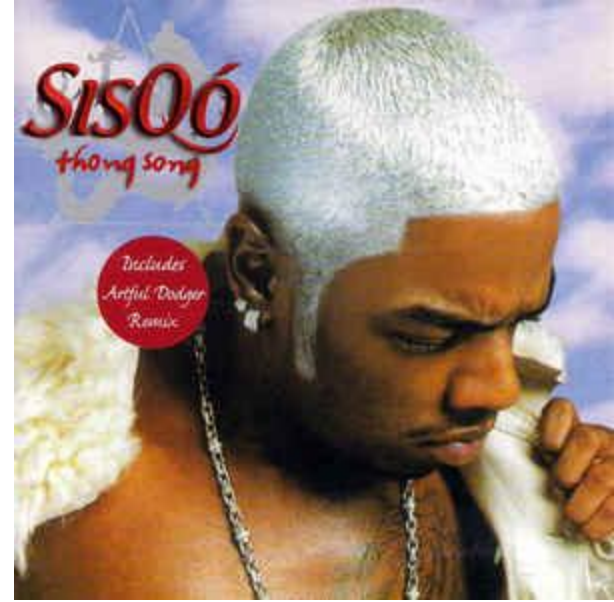
Methodology

- **8,000 songs**
- **Line-by-line analysis**
- **Phrase vs. chord change**
- **Guitar tabs and chords**
- **Rock, pop, country, folk**

Technologies

- **Python**
- **PyMongo**
- **Selenium**
- **BeautifulSoup**
- **MatPlotLib**
- **Natural Language Processing**
- **Tf-Idf Vectorization**
- **Logistic Regression**
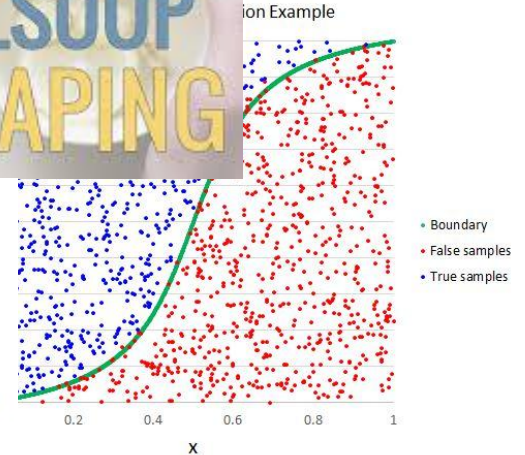
Relative Chord Probabilities: Line-by-line

Chords list = A, B, C, D, E, F, G, A7, D7, Em, Am, Bm, Dm, Bb

Line: **"I haven't slept a wink."**

Song: "I'm so tired"

Artist: The Beatles

Line-by-line Chord Probability Analysis
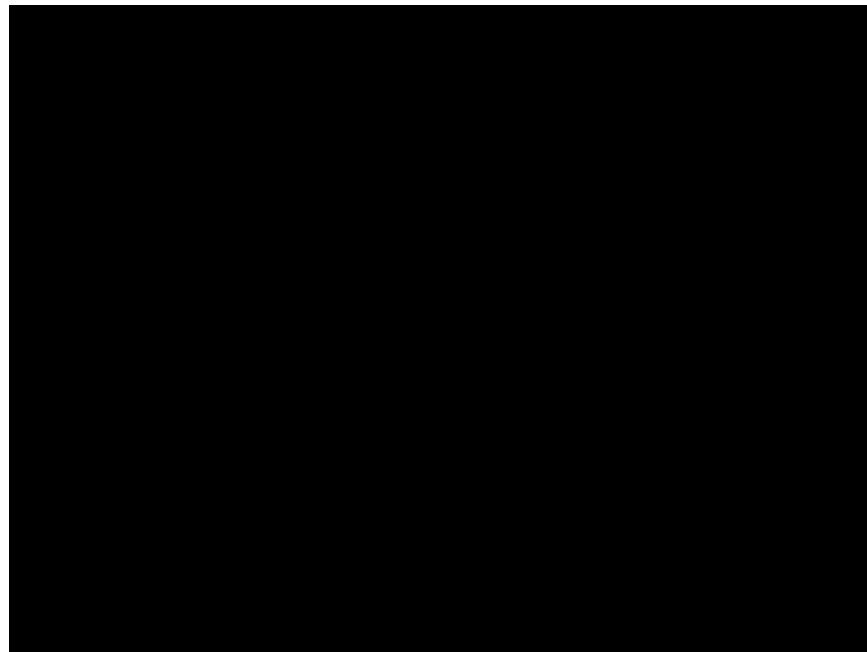
Results

"I'm So Tired"

The Beatles

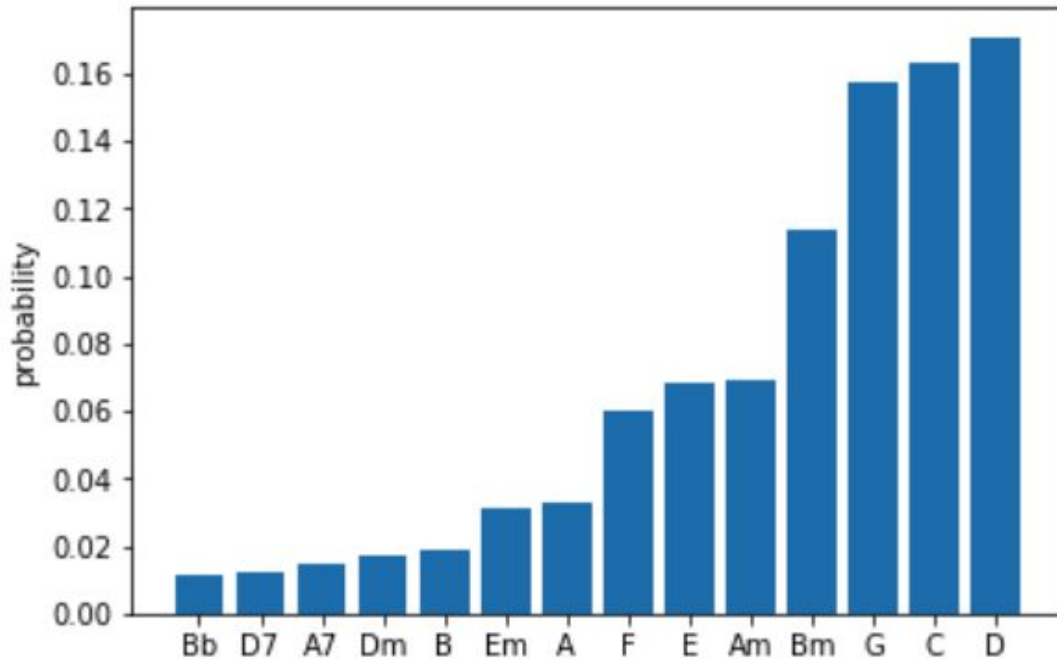| Line	Predicted Chord	Actual Chord
I'm so tired	G	A, G#7
I haven't slept a wink	D	D, E
My mind is on the blink	C	D, E
I wonder should I get up	C	A, E
And fix myself a drink	G	F#m, Dm
I don't know what to do	Bm	D, E
My mind is set on you	C	D, E
I wonder should I call you	C	A, E
But I know what you'd do	F	F#m
You'd say I'm putting you on	F	A
But it's no joke	C	A
It's doing me harm	C	A
You know I can't sleep	G	E
I can't stop my brain	G	E
You know it's three weeks	G	E
I'm going insane	C	E
You know I'd give you everything I've got	G	D
For a little peace of mind	D	D, A

Results

"Landslide"

Fleetwood Mac

Line	Predicted Chord	Actual Chord
I took my love	C	C
I took it down	G	Am7
I climbed a mountain	C	C
I turned around	C	Am7, C
I saw my reflection	C	C
In the snow covered hills	C	Am7, C
Until the landslide brought me down	G	C, Am7
Mirror in the sky	C	C
What is love?	Bm	Am7
Can the child with my heart	G	C
Rise above?	Am	Am7
Can I sail through	G	C
The changing ocean tides	C	Am7, C
Can I handle the seasons of my life?	G	C, Am7, B
I've been afraid of changing	C, G	G
Because I built my life	C	C
Around you	D	Am, D7

Let's try it out!

Our first song:

A favorite a poem

Wild Geese

You do not have to be good.
You do not have to walk on your
knees
For a hundred miles through the
desert, repenting.
You only have to let the soft
animal of your body
love what it loves.
Tell me about despair, yours, and
I will tell you mine.
Meanwhile the world goes on.
Meanwhile the sun and the clear
pebbles of the rain
are moving across the landscapes,
over the prairies and the deep
trees,
the mountains and the rivers.
Meanwhile the wild geese, high in
the clean blue air,
are heading home again.
Whoever you are, no matter how
lonely,
the world offers itself to your
imagination,
calls to you like the wild geese,
harsh and exciting --
over and over announcing your
place
in the family of things.

Wild Geese (poem by Mary Oliver): Chords

Line	Chord	Line	Chord
You do not have to be good.	D	over the prairies and the deep trees,	G
You do not have to walk on your knees	F	the mountains and the rivers.	G
For a hundred miles through the desert, repenting.	C, C	Meanwhile the wild geese, high in the clean blue air,	G
You only have to let the soft animal of your body	G	are heading home again.	G
love what it loves.	Bm	Whoever you are, no matter how lonely,	G
Tell me about your despair, yours, and I will tell you mine.	C	the world offers itself to your imagination,	D
Meanwhile the world goes on.	C	calls to you like the wild geese, harsh and exciting --	G
Meanwhile the sun and the clear pebbles of the rain	C	over and over announcing your place	G
are moving across the landscapes,	G	in the family of things.	C

Let's try it again!

Our second song:

A favorite wikipedia page

Geese (Waterfowl): Chords

Line	Chord	Line	Chord
Geese are waterfowl of the family Anatidae.	G	Paired geese are more dominant and feed more	C
More distantly related members of the family Anatidae are swans	C	two factors that result in more young	C
most of which are larger than true geese	G	The term goose applies to the female in particular	C
and ducks, which are smaller.	G	while gander applies to the male in particular	C
Geese are monogamous,	G	Young birds before fledging are called goslings	G
living in permanent pairs throughout the year	C	The collective noun for a group of geese on the ground is a gaggle	C
however, unlike most other permanently monogamous animals	G	when in flight, they are called a skein, a team, or a wedge	D, G
they are territorial only during the short nesting season	C	when flying close together, they are called a plump	G, D

Next Steps :

- Improve accuracy
- Incorporate music theory
- Chord change timing
- Transpose for capos
- Sentiment Analysis
- Genre generator
- Recommend similar artist

THANK YOU!

Questions?

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