# HUMMING BIRD

Curriculumn Project:

Cheyenne Lu

# PURPOSE

Song stuck in my head? How can I figure it out when I don’ t have lyrics?

Google Hum

Shazam, but for humming, but for classical music

Shazam

# HOW IT WORKS

Splice MP3 to numbers

Apply to Input

Humming Bird

Start Listening

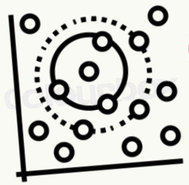
Final Predicted Song:

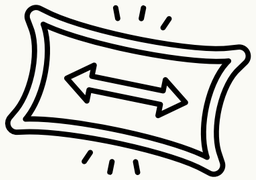
Waiting for prediction...

Output Prediction

Dynamic Time Warping

K Nearest Neighbor

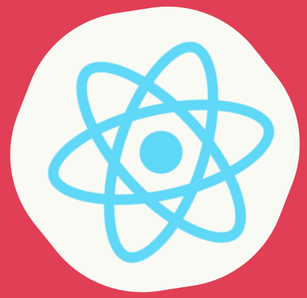




# WHAT I USED

1. Youtube mp3 free converter

2.Librosa Library

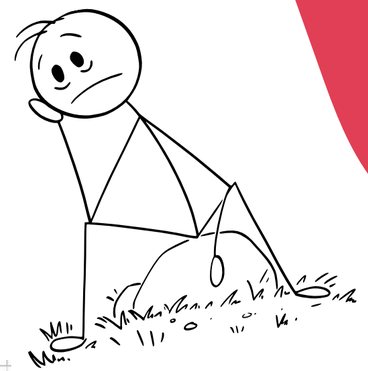


3.React Js

4.FastAPI

# SO...HOW WELL DOES IT WORK

# NOT VERY BEST...



By Chance: 1.96%

3.3%

| 3) | 1 | 2 | 3 |
|---|---|---|---|
| /altzC | oncerto No. 2, | oncerto E Minor | No. 5 in D majc |
| lade | leine Nachtmus | oncerto E Minor | The Nutcracker |
| Claire de lune | ndel - Messiah.n | oncerto No. 2, | ncerto in A min |
| L'isle Joyeuse D | oncerto No. 2, | ny No. 40 (first | hony No. 5 - A |
| Dvorak Symphon | hony No. 5 - AD Minor, Op. 12 | | oncerto No. 2, |
| Dvorak Humores | oncerto E Minor | garian Rhapsody | . 9 (From the N |
| Eine Klein Nact | oncerto E Minor | Etude Op. 10 N | leine Nachtmus |
| Wedding March | oncerto No. 2, | oncerto E Minor | . 9 (From the N |
| bumblebee | ar (12 variations | oncerto E Minor | al Fireworks, H |
| Peer Gynt | e – Queen of the | oncerto E Minor | of Man's Desir |

k=4 chain = 5

| Piece (k=4) | 1 | 2 | 3 |
|---|---|---|---|
| Brandenburg | e – Queen of the | oncerto E Minor | oncerto No. 2, |
| Fur Elise | ncerto in A min | oncerto E Minor | ndel - Messiah.n |
| Moonlight Sonat | - Polonaise, Op | hony No. 5 - A | . 9 (From the N |
| Beethoven 5 | ven_Symphony | hony No. 5 - A | oncerto No. 2, |
| Bizet Habanara | oncerto E Minor | . 9 (From the N | ndel - Messiah.n |
| Chopin Etude 3 | e No.1 in G mina | – Queen of the | nc in |
| Fantasie Im | ndel - Messiah.n | leine Nachtmus | |
| Nocturn C# mino | oncerto E Minor | oncerto No. 2 | |
| nocturn op 9 no | zart - Requiem.r | - Polonaise, C | |
| CHopin Polonais | e – Queen of the | zart - Requiem.ra | |

3.3%

20%

| | | |
|---|---|---|
| ncerto No. 2, | leine Nachtmus | ndel - Messiah.n |
| Handel water mu | hony No. 5 - A | oncerto No. 2, |
| Handel Music for | No. 5 in D major | oncerto in A min |
| Bach preldue no | - Polonaise, Op | ny No. 40 (first |
| Jesus joy of mar | oncerto E Minor | of Man's Desir |
| Brahms Hungari | ven_Symphony | oncerto E Minor |
| Listz Hungarian | ven_Symphony | . 9 (From the N |
| Mahler symphon | ncerto in A min | hony No. 5 - A |
| Mendhelsohn soa | r (12 variations | . 9 (From the N |
| Mendelsohn viol | oncerto E Minor | e – Queen of the |

k=5 chain = 4

k=3 chain = 5

# Challenges and Improvements

## Accuracy

Entire song vs "hummable" slice

Mic too sensative

Oversimplification of melody

Longer pieces higher chance of detection

# THANK YOU FOR LISTENING!

Shoutout to Isaac & Bree