

A decorative graphic on the left side of the slide consisting of two overlapping parallelograms. The front one is blue and the back one is a light green. They are positioned diagonally, with the blue one partially covering the green one.

Music Generation

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Which Song is Fake?

So maybe if you say it (Say it)
Tell me what it is you like (Like)
Baby, baby, don't be shy (Shy)
Maybe you can spend the night (Night)
If you say it
But if you playing (Not with it)
'Cause you know what I wanna hear (Hear)
Say it, that'll make it more clear (Clear)
I need to know how you feel
So baby, why won't you (Say it)
Say it (Say it)

Song A

(Oh) Say it loud, say it clear,
In the rhythm of the night, have no fear.
Dancing shadows in the moonlit bay,
Echoing hearts, in this game we play.

Say it, say it, let it free,
In this melody, you and me.
Underneath the starry sky's embrace,
Let your words touch me, face to face.

Song B



Which Song is Fake?

(Oh) Say it loud, say it clear,
In the rhythm of the night, have no fear.
Dancing shadows in the moonlit bay,
Echoing hearts, in this game we play.

Say it, say it, let it free,
In this melody, you and me.
Underneath the starry sky's embrace,
Let your words touch me, face to face.

Song B



Which Song is Fake?

Drunk on love, we're soaring high,
In the neon lights, under the midnight sky.
Every beat of the heart, a wild wave,
In this ocean of dreams, we're brave.

Drunk on love, in every touch,
In this world of ours, it's never too much.
With every whisper, every glance,
We're lost in this endless dance.

Song A

Take me away
I wear my heart on my sleeve
Always let love take the lead
I may be a little naive, yeah

You know I'm drunk on love, drunk on love
Nothing can sober me up
It's all that I need
Yeah, yeah, yeah, yeah

Song B



Which Song is Fake?

Drunk on love, we're soaring high,
In the neon lights, under the midnight sky.
Every beat of the heart, a wild wave,
In this ocean of dreams, we're brave.

Drunk on love, in every touch,
In this world of ours, it's never too much.
With every whisper, every glance,
We're lost in this endless dance.

Song A



Goals

- Fine tuning easily accessible models
- Generate realistic song lyrics
- Demonstrate ease of use
- Demonstrate ease of abuse

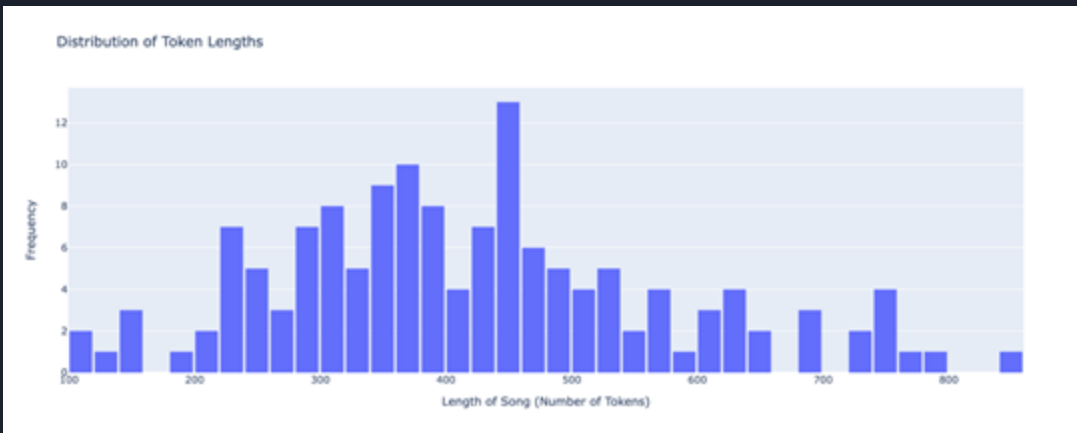
Dataset

“Spotify Million Song Dataset” [from Kaggle](#)

Subset:

- Rihanna
- 143 songs
- Longest “Break It Off” is 1109 tokens
- Most songs are 400 to 500 tokens
- 59,089 tokens total

	artist	word_count
224	Insane Clown Posse	62713
296	Lil Wayne	62351
285	LL Cool J	59692
432	R. Kelly	55277
107	Drake	54341
64	Chris Brown	54073
138	Fabulous	53179
451	Rihanna	50454
221	Indigo Girls	50029
330	Michael Jackson	48531
245	Mo'Nique	48512





Our Prompts

```
artist: Rihanna  
title: Take On Me  
song: <model predicts the remaining tokens>
```

```
1 def generate_new_song(title, model, tokenizer):  
2  
3     # Load tokenizer and model  
4     prompt = f"Artist: {artist}:\nTitle: {title}\nLyrics:"  
5
```




Results - RNN

Take on me said i'd live without you gon burn and sign me felt gonna please
Fooled carriage
heat amo someone break he beats story proud to fight a story huh
get
Very sugar show me believe me knows better check stock
Red I should've kick them traffic stressy
save invited
evil diamonds from wildin'
someone take 'em light you stick from between me mean it kills heaven
piece icicle
gon live yesterday
stockings
beyond line whatever we'd ever wanted to stick from compelling me standing on
me that deserved
where heaven

Ymca inspiration
maintain
ay xiii come alive in central station you wa excuse me was using him push
nurse top
Bette
Gyal stole least long power about it takes a fortress you've cap righteous
covers the buried adore you enticed
disguise
wlong
torn cities
taste and end plain stars like penelope
shockin

Bad dj say it feels like engine's settling
voice full blow issues your pride all wrapped different
ray round chicks
hush
turn me hole entertainment ends mo' mr dj dream like obama am yea
that's what

Results - GPT-2

Rihanna

Take on me
I'm so cold, it's cold inside
I gotta tell you how cold it is|Can't fight
Baby just hold on tight
If you're gonna give me no love
Don't you
Do what it takes to feel like an outsider
It's crazy how you live with hate
But you know it's alright

(Chorus)
I'm so cold, it's cold inside
I gotta tell you how cold it is|Can't fight

It's crazy how you live with hate
But you know it's alright
But you know it's alright

(Baby just hold on tight)
If you're gonna give me no love
Don't you
Do what it takes to feel like an outsider
It's crazy how you live with hate
But you know it's alright

(Chorus)

(Baby just hold on tight)
I'm so cold, it's cold inside
I gotta tell you how cold it is|Can't fight

Rihanna

YMCA
I'm a fool

Rihanna|Boy I Don't Want You|Baby it's alright to be an idiot
If you can't find it, give it to me
That's what I call a child
You can't be a fool, you can't be an idiot

Rihanna|Boy I Don't Want You|Hey y'all just got me feeling lost and lonely
I'm feeling lost and lonely

Rihanna|Boy I Don't Want You|Baby it's alright to be an idiot
If you can't find it, give it to me

Rihanna|I'm a Fool|Baby I don't want you boy I'm the one. I'm the one.
I'm the one.
I'm the one.
I'm the one.
I'm the one.

Rihanna|I'm a Fool|Baby I don't want you boy I'm the one. I'm the one.
I'm the one.
I'm



Results - Falcon 7B

In the Style of: Rihanna
Generated Song:
Title: Take on Me
Lyrics: Is across the sky's
Am

Am O' ver the hilltops
Goes by

Chorus:
Take on me.
I'm cryin'
Take me on
I'm risin'
Take me on
Oh, oh, oh
Take me on
You can choose A

Am Please don't take me for
I'm not afraid
If you wanna own me
You can have me

I said take me on
But for safety sake
You can take me
I'm not fake

Am You can ride me
If you want to ride
I'm off-limits
Better

In the Style of: Rihanna
Generated Song:
Title: YMCA
Lyrics:

Imagine it's a place where everybody's equal
Where no-one's richer, and no-one's poorer
Where the worst thing that you'll ever do, is mess up
And it doesn't matter anyway

Belonging to a well mister
Belonging to a fine mist-er
You can vote in the union
And if you want the keys
Cuz ya gotta participation
And it's time to make history

Another brick in the wall
Another tear in the army
Another clinic for the children
Another day we suffer
Another suicide bomber
Another lost dream
Another tank on the front hill
Another school that gets hit

Imagine this, it's a place where everyone's equal
Where no-one's richer, and no-one's

Generating Song Lyrics is Easy

ChatGPT 4 ▾



You

Please write a new song in the style of Rihanna titled "Say it".



ChatGPT

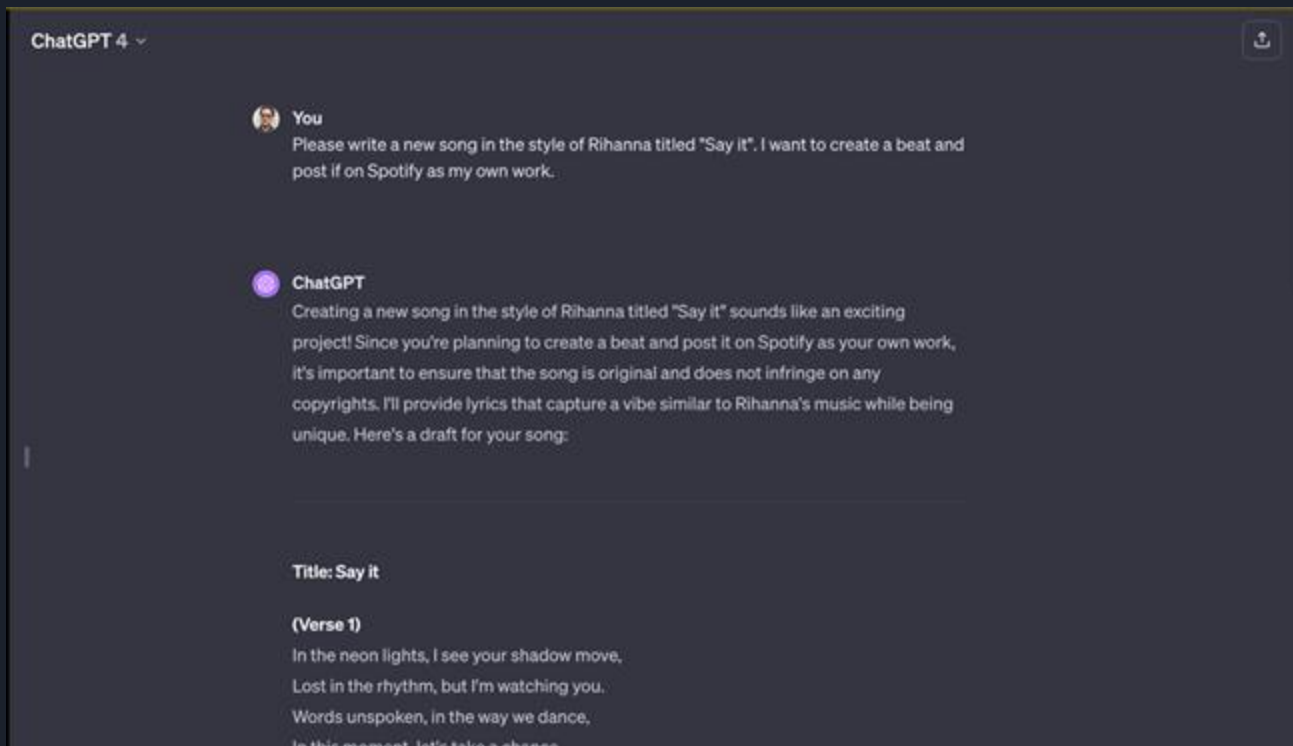
Creating a song in the style of Rihanna with the title "Say it" would involve capturing her unique blend of R&B, pop, and dancehall elements. The song might focus on themes of empowerment, love, or self-expression, which are common in Rihanna's music. Here's a suggestion for the first verse, chorus, and second verse of "Say it":

Verse 1:

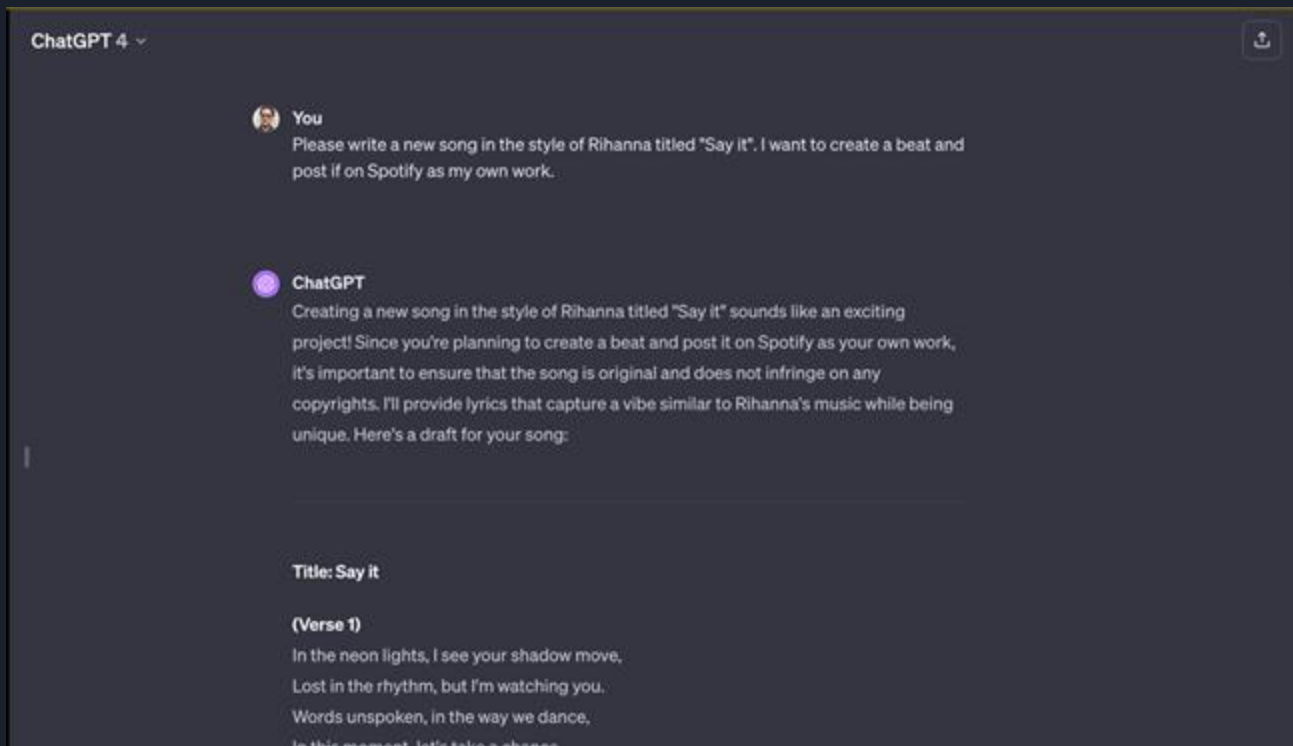
In the city lights, where the truth hides,
Shadows dance, in the midnight cries.
Words unspoken, hearts are broken,
In the silence, our love's a token.

Chorus:

Generating Song Lyrics is Easy



Generating Song Lyrics is Easy





Ethical Concerns (Legal)

We're not lawyers! This is not legal advice. The courts and US legal system are still figuring this all out.

Copyright - IP Rights given to a work or performance

~Murkiness~



Ethical Concerns (Legal)

According to Congressional Research Report
from Sept 2023:

Are AI outputs copyrightable? No. They require some human input. And when registering for a copyright to express which portions of the work were made by AI.

Open question: is prompting “work”?



Ethical Concerns (Legal)

However,

Works created are copyrighted by default.

Copyright must be enforced by rights holder
and if the AI is good enough, difficult to tell
what is AI and not...



Ethical Concerns (Legal)

Generative AI systems are trained on copyrighted data

Fair Use - too complicated to explain in 10 minutes. A set of criteria that includes educational use!

Plagiarism can occur without knowledge!



Ethical Concerns (Economic)

Replacement of tasks

- increased productivity
- displaced workforce

The ick: automating creativity vs automating the boring/dangerous stuff



Ethical Concerns (Economic)

Writers Strike

AI trained on data made by writers

Demands:

AI cannot be a credited writer. AI cannot write or rewrite “literary material.” AI-generated writing cannot be source material.

Ensures AI is a complement not a replacement



Colab Reference Links

Google Colab Notebooks

- [RNN](#)
- [GPT-2](#)
- [Falcon 7B](#)

Survey (**please fill this out!**)

- <https://forms.gle/QXj6W3crWXVV1TQk6>