

## Could AI write spiritual lyrics as humans do?

### Introduction

My initial purpose of this project is to use machine learning to create lyrics of a rap song that could probably win the Grammy Awards, but later I found that this wouldn't work at all, which I will explain in the next part. For this project I used the GPT-2 to train my model and generate result, and Sublime Text as a tool to remove unnecessary parts of input lyrics. The database is the lyrics of the rap songs that won Grammy Awards in the past eight years.

### Analyzing Result

- **The Format**  
After getting the generated lyrics, I tried to transfer the lyrics into images, but it seemed that AI couldn't understand the lyrics well. This may due to the non-descriptive intrinsic of rap music. I also tried to transfer lyrics into music videos, and this also didn't make any sense. So the format of result is just in text.
- **Interpreting with respect to Original Purpose**  
All the generated lyrics are mixtures of the input lyrics file and this would results in high plagiarism. Although I have tried different num\_step and temperatures to make the model more creative, after choosing the most appropriate num\_step(2500) and temperature(0.9) the problem still occurs. The similarity of the "best" piece of lyrics to the original file is about 75%, which is not a satisfactory result. Besides this, the lyrics are incoherent, especially for those generated with prompts, it seemed like the prompts are added by force. As a result, it is not a qualified song, and there's no chance for it to win the Grammy Awards.
- **What else can we see from the result?**  
Analyzing the 9 pieces of lyrics I got, I found that the most common topics of successful rap songs are about self mockery and exposing social issues from personal experiences. This means that If I give AI a meaningful topic, the generated lyrics will be "successful", and vice versa. We could also see the issue that for the past decade the rap topics of Grammy winners are becoming similar to each other, such as the promotion of human right and criticism about current situation. This in not a good thing for music development, because musicians will just write what the public want for good, instead of creating what they really want. This also reflect the common negative atmosphere of over aspiration of fame and fortune among rappers.

### "Best" Piece of lyrics

Here's my best generated lyrics(that I think would have the highest chance of wining). I set the prompt as "die young" because it is a meaningful topic, and it fits in the

common topic range of rap music.

**die young** again, I gotta toast to that  
Into everything I say, get back that old maniac  
In fact, there they go tryna hold on (huh?)  
'Cause you haven't seen a couple since 1Night  
You're in a hurry, you're on  
And I'm always on, I was too late  
Ain't no kinds of shit, I just hit 3-2 special  
I'd always treat my gang like family members  
Even when I'd have them your care  
And I just had enough of chance  
I could always treat my gang like family members  
Even when the changing nigga never changed up  
I always had confidence, I always had confidence  
I always had confidence, I always had confidence  
I always had confidence, I never had hope  
I always had confidence, I never had hope  
I'm always on go mode, I just wasn't always had confidence  
I always had confidence, I ain't never had anxiety  
I ain't never had anxiety  
I ain't never second-guessed myself  
If I want it, I go get it  
I'm always on go mode, I don't know what fear is  
And you talk about that nigga? I'm him  
I'm

=====

**die young** again, 14-something confusion before the suit and tie  
Strangers become mistakes but those mistakes made you feel alive  
Hindsight is vibrant, reality, rarely lit  
Memories a collage pasted with glue that barely sticks  
Good Lord, they broke all my shields  
Locks, bathroom doors, graffiti and high heels  
Until you felt the altitude, you don't know how high feels  
Party Mountain, some don't ever come down from around here  
Eh, to be young again, I guess it's relative  
The camera lights, the whiskey rise, sink into the skin  
I fantasise about a second wind  
Grow my'stache, pick up another bad habit and let the games begin  
Sounds of the city on Capitol Hill  
Where I question if what I'm seeing here is real  
Cowboy boots, doing lines at the bar  
Where the time goes slow when you're drinking PBR  
Sounds of the city on Capitol Hill  
Where I question if what I'm seeing here is real

Cowboy boots, doing lines at the bar  
Where the time goes slow when you're drinking PBR  
Sounds of the city on Capitol Hill  
Where I question if what I'm seeing here is real  
Cowboy boots  
=====

**die young** again

With what I had to pray to get at night  
About the only girl that cared about you when you asked her  
And how she think about you when you asked her  
About the only girl that cared about you when you asked her  
And how she think about you when you asked her  
I'ma care for you like you got your heart thawed  
You asked me if I'm care about you  
And put emphasis on your "fuck you"  
I'm in the mirror with this look on my face  
You're in a fight with me  
I felt like you'd get blocked just trying to catch a beat  
I fell, fell, down  
Guess it's just the way that I've dressed  
I'd battle that 'til I crash  
If you'd better be a better woman  
Thought you'd give your ass a better hand than you are  
To avert a disaster, lucky no permanent damage  
'Cause they hurt you so bad  
It's like they murdered your ass  
And threw dirt on your casket  
But you've returned from the ashes  
And that hurt that you have, you just converted to gasoline  
And while you're burning the past  
Standing at inferno and chant  
I'm standin

Obviously, the “best” lyrics I got is still far away from being recognized by the public, so at this moment AI just can’t replace humans as a song writer. However, we can’t deny the high potential of AI in this field. Although the model has high similarity, it is very effective in automatically filtering related lyrics about the prompt I gave from the original text file.

## Appendix

### Models

Here’s the link to the trained model with 2500 steps(selected one).

[https://drive.google.com/drive/folders/1N3DIRT8FPZMN\\_NWr5TsChxHyh3LgZaB7?](https://drive.google.com/drive/folders/1N3DIRT8FPZMN_NWr5TsChxHyh3LgZaB7?)

[usp=sharing](#)

Here's the link to the trained model with 5000 steps(minor one).

[https://drive.google.com/drive/folders/1sEt2T6TokcB1tKkYv3yJNLCq\\_k2nMuMU?usp=sharing](https://drive.google.com/drive/folders/1sEt2T6TokcB1tKkYv3yJNLCq_k2nMuMU?usp=sharing)

### Generated Results

Here's the link to the lyrics I got from the 2500\_rap\_model. For the first four pieces I directly generated without prompt, and for the last five pieces I gave different prompts.

<https://docs.google.com/document/d/1qkeH88HGy4seHROwgn3Caowj-qTJoT2Y/edit>