



It Was Never a Phase... It's a Lifestyle!

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About the Project: Goal



The purpose of the project is to create a lyric generator which will finish your lyrics in the style of the artist/band of your choosing.

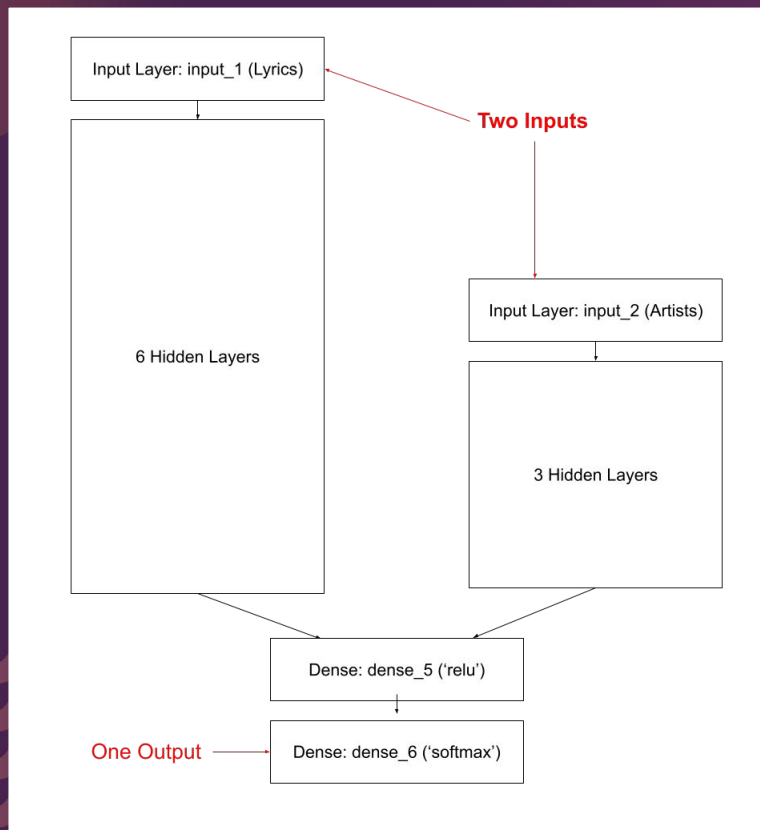
This model was trained on 15 punk rock bands.

🎵 About the Project: The Dataset 🎵



- The dataset was found on Kaggle (AZ Lyrics Data Set)
 - There are 5 columns, but we will only focus on two:
 - Artist Name
 - Lyrics

The Model: How it works



We used a Long Short-Term Memory model, which is a neural network with a sequence memory in it.

The song lyrics and the respective artist are:

- 1) converted into their own array of numbers,
- 2) fed into the model and are passed through their own hidden layers separately,
- 3) merged, and, finally,
- 4) predict the next word in a string of lyrics.

The Model: What it does

Using the model, a function was created that takes in the following parameters:

- a prompt (of lyrics)
- an artist, and
- the number of words we want the generator to predict (plus the length of the prompt).

This will then write the rest of the lyrics in the style of the given artist



Results: How it's measured

Using TextBlob's sentiment analysis, we looked at the polarity number from the sentiment analysis.

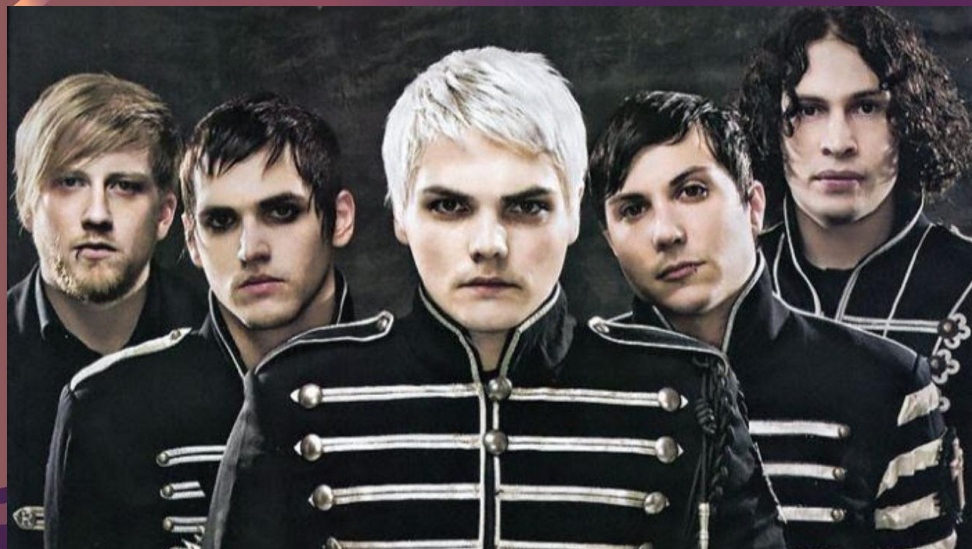
This measures how positive or negative a message is.

- Polarity is close to -1 : the more negative the message.
- Polarity is close to $+1$: the more positive the message.
- A score of 0 denotes the message was neutral.

Results

Lyrics to finish: "there's a place off ocean avenue" in the style of...

My Chemical Romance



"... negative razor inroads
disposable satellite others
questioned apology
dorms teenage planned
pour teaching stones" 🎵

Predicted Polarity: -0.15
True Polarity: -0.26



Results

Lyrics to finish: “there’s a place off ocean avenue” in the style of...

Yellowcard



“... unrestful bright snotty
unkind sources given
ambulances laundry ahold
discard lays bags resolve
rewind” 🎵🎵

Predicted Polarity: 0.70
True Polarity: 0.20



Next Steps

- 1) Refine the model
- 2) Add more artists for different writing styles and, potentially, add more song lyrics



Live Demonstration

Write your lyrics

Select an artist from the list.

All Time Low ▼

Input a length you want the lyrics to be (total length includes length of prompt)

Submit

Thanks!

Do you have any questions?



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Appendix: Tech Stack Used



NumPy

matplotlib



TensorFlow



Keras

RegEx



Amazon
SageMaker



Flask

web development,
one drop at a time

colab



TextBlob

Appendix: The Model

