

Using AI to help musicians

PRAJWAL DESHKAR

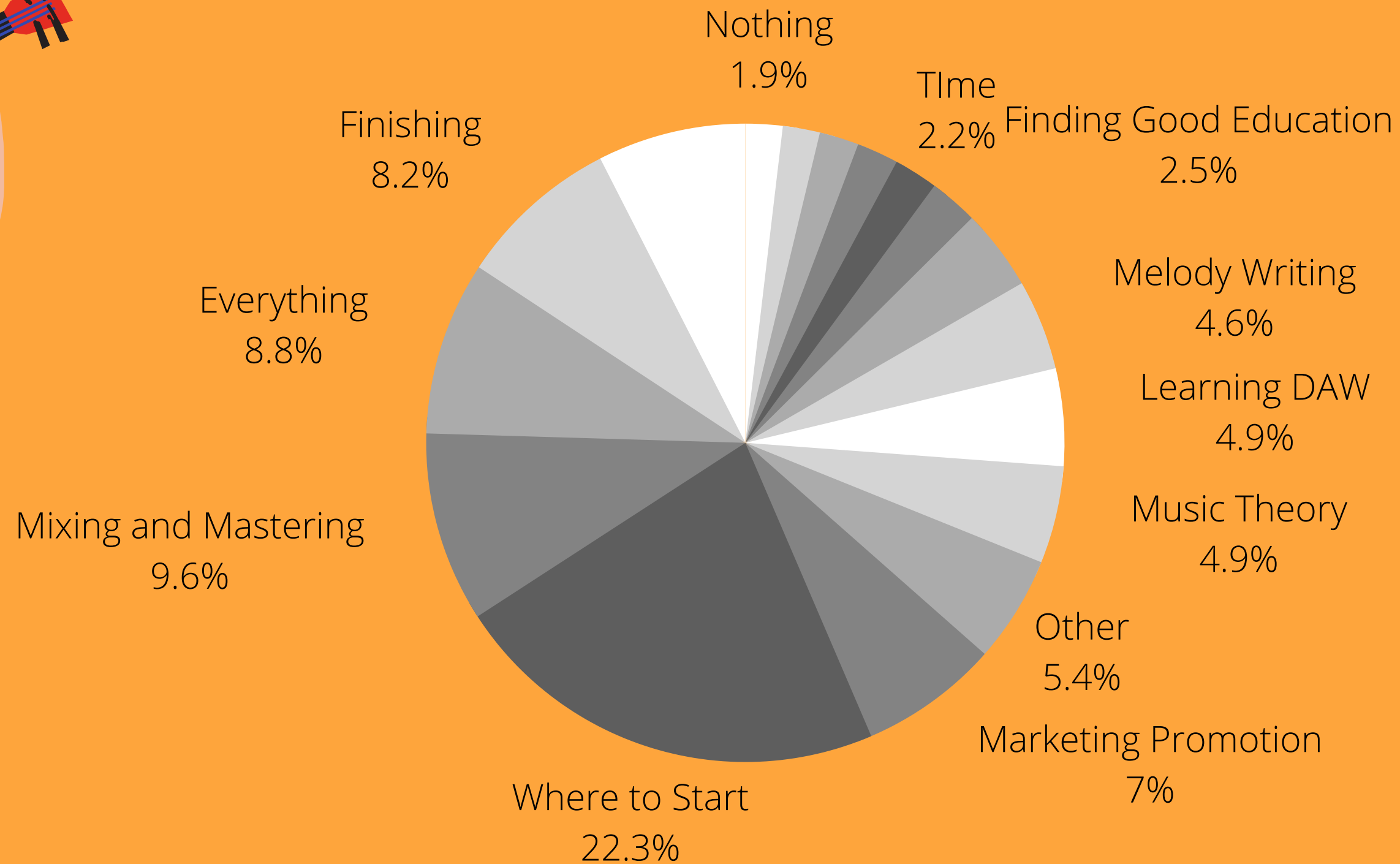




About me

- A graduate student studying MS Technology Ventures at Integrated Innovation Institute of CMU.
- Music Producer & DJ
- Founded a TechMusic Startup

Problems Faced by Music producers



How do I solve this problem?

I cannot come up with new melody or chord progression!

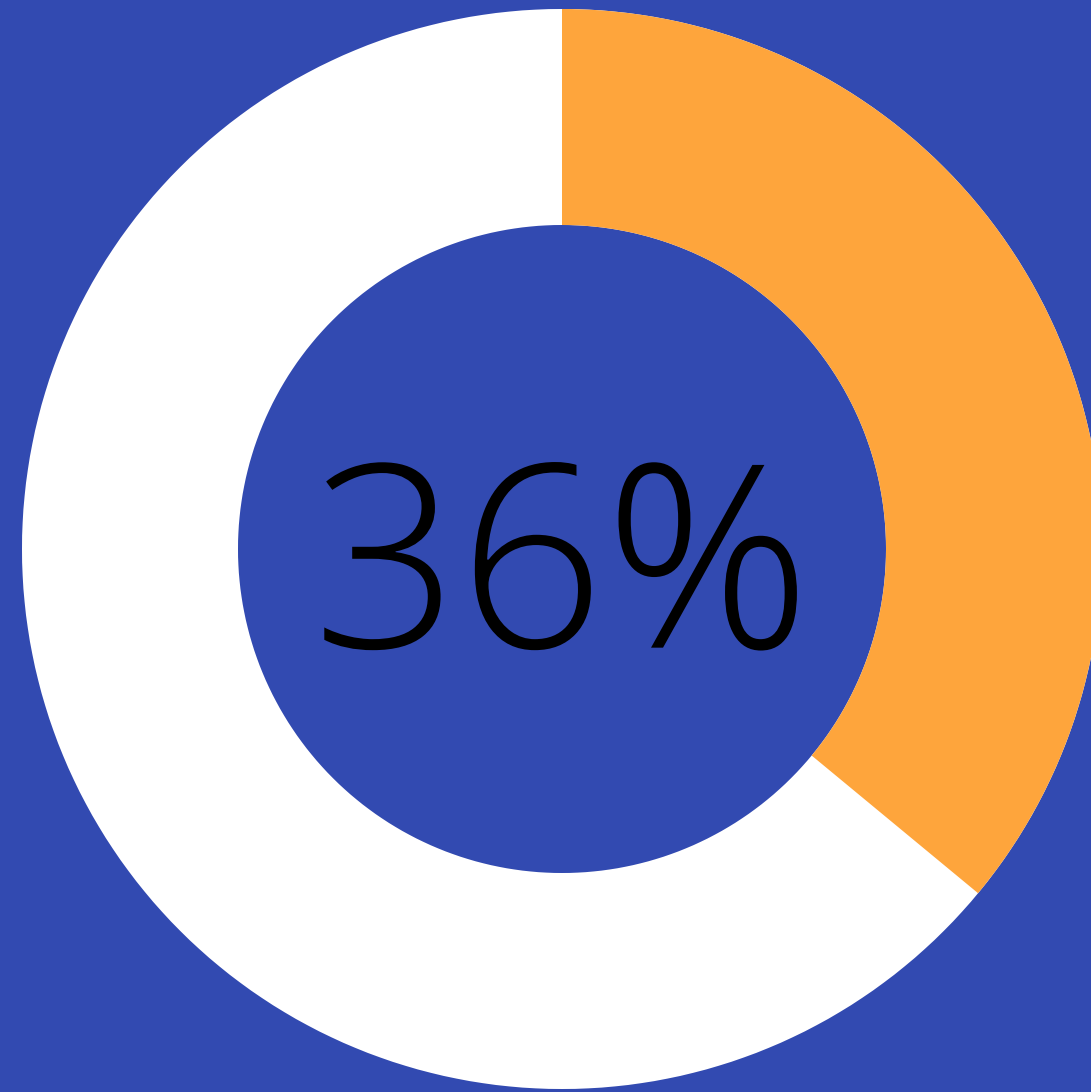
What if AI can make a rough melody or chord progression for me?

Since I have to predict a sequence RNN's would be the best!

Replaced RNNs by LSTM to overcome vanishing gradient problem



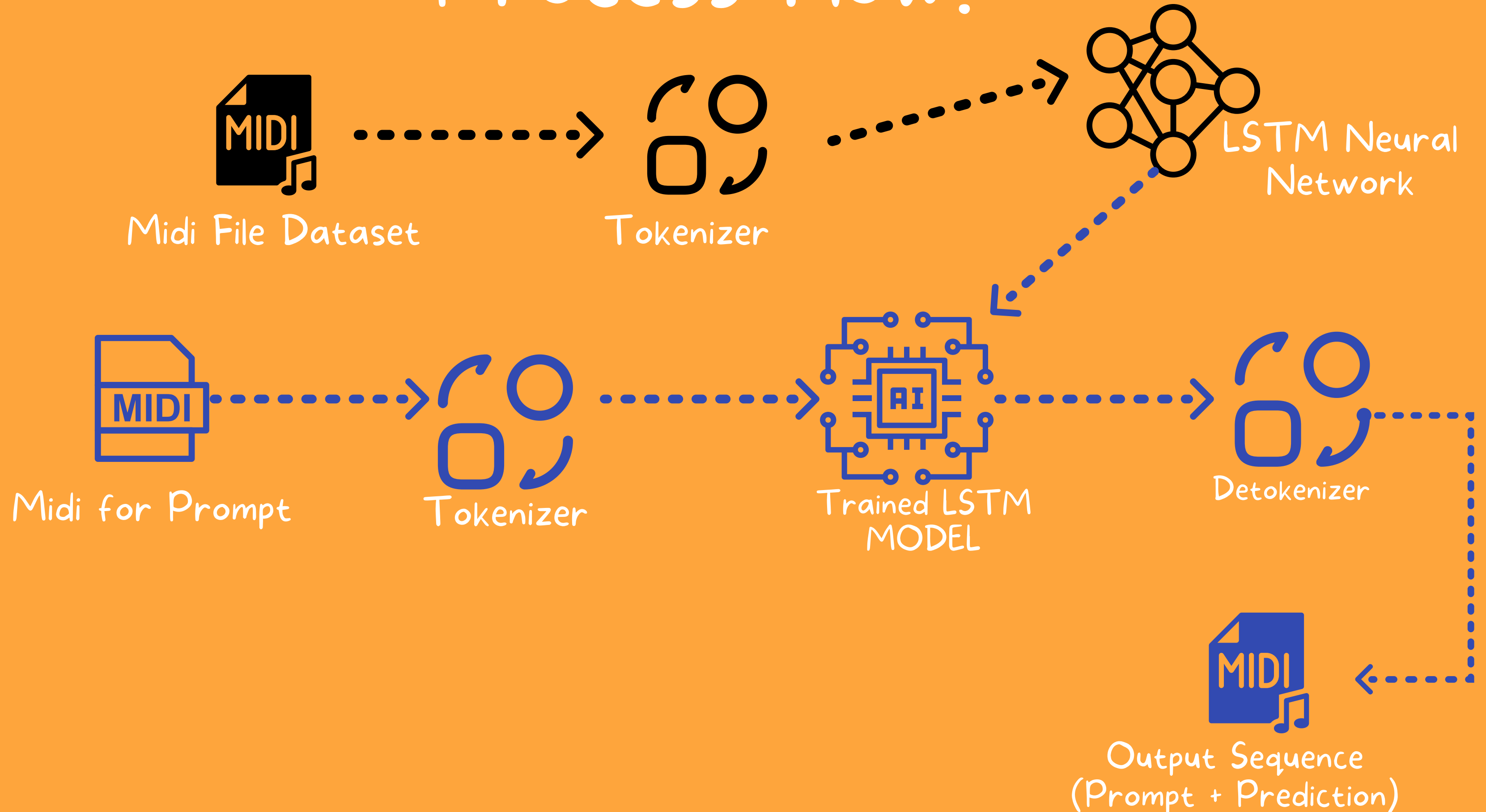
How much of it can my trained
model can solve?



I feel saturated!



Process Flow!



Input Promopts

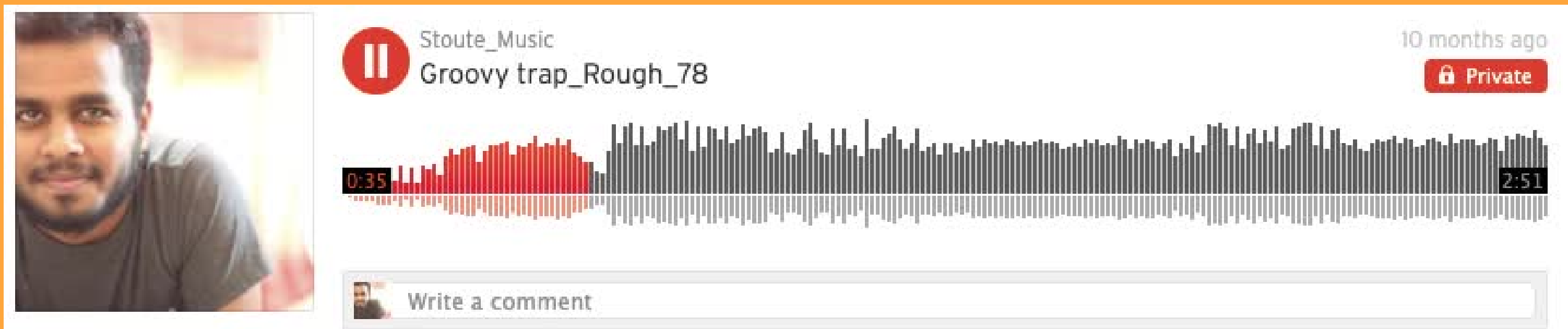


Stoute_Music
Flute Moombathon

3 years ago
Private

0:08 0:53

This is a YouTube video player interface. On the left is a profile picture of a man with a beard. To the right of the picture is a red play button icon, the channel name 'Stoute_Music', and the video title 'Flute Moombathon'. Further right, it says '3 years ago' and 'Private' with a lock icon. Below this is a waveform visualization of the audio, with a red segment on the left and a black segment on the right. Time markers '0:08' and '0:53' are visible on the waveform.



Stoute_Music
Groovy trap_Rough_78

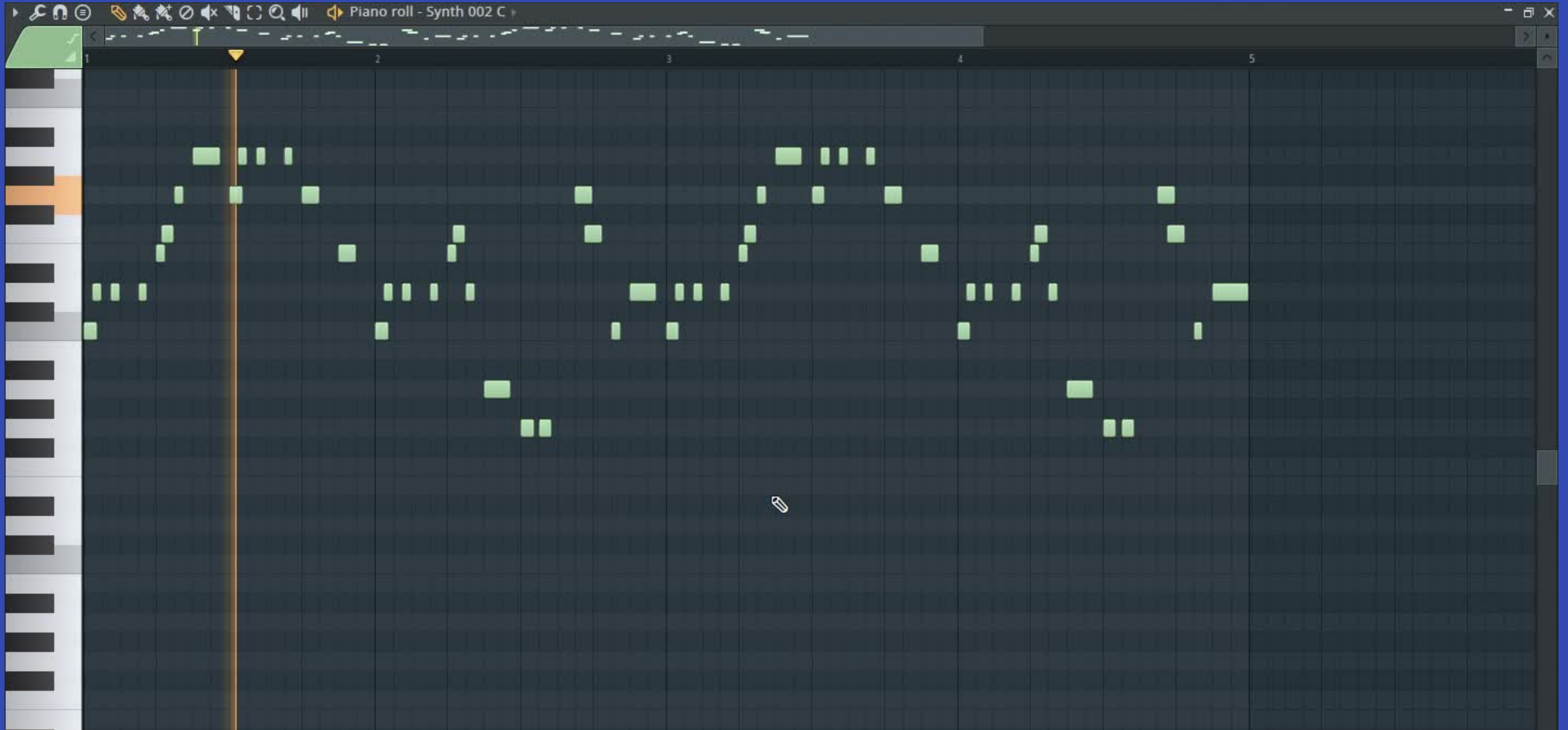
10 months ago
Private

0:35 2:51

Write a comment

This is a YouTube video player interface. On the left is a profile picture of a man with a beard. To the right of the picture is a red play button icon, the channel name 'Stoute_Music', and the video title 'Groovy trap_Rough_78'. Further right, it says '10 months ago' and 'Private' with a lock icon. Below this is a waveform visualization of the audio, with a red segment on the left and a black segment on the right. Time markers '0:35' and '2:51' are visible on the waveform. At the bottom, there is a comment box with a small profile picture and the text 'Write a comment'.

Made Input a liittle more complex

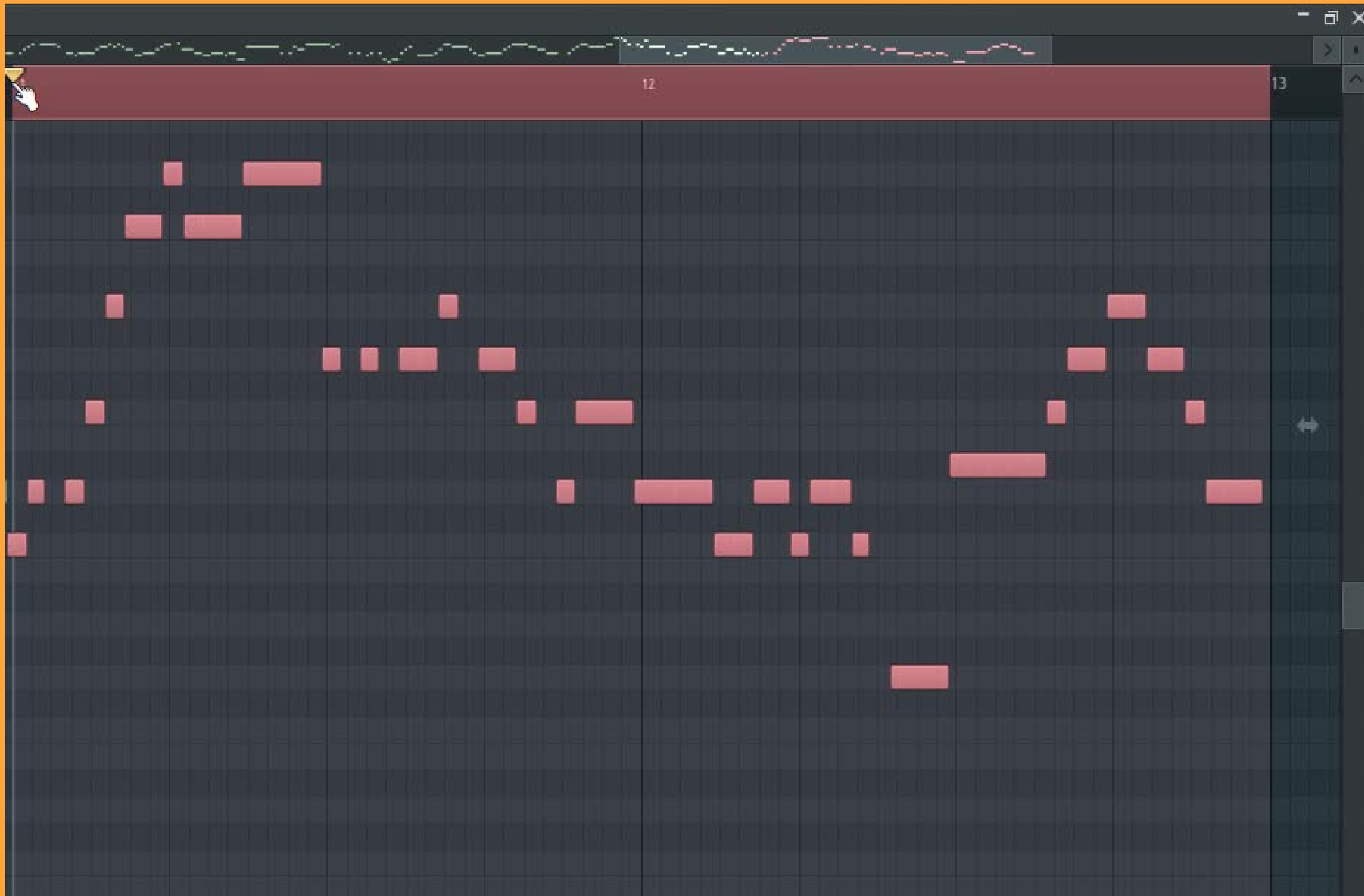


Output by AI

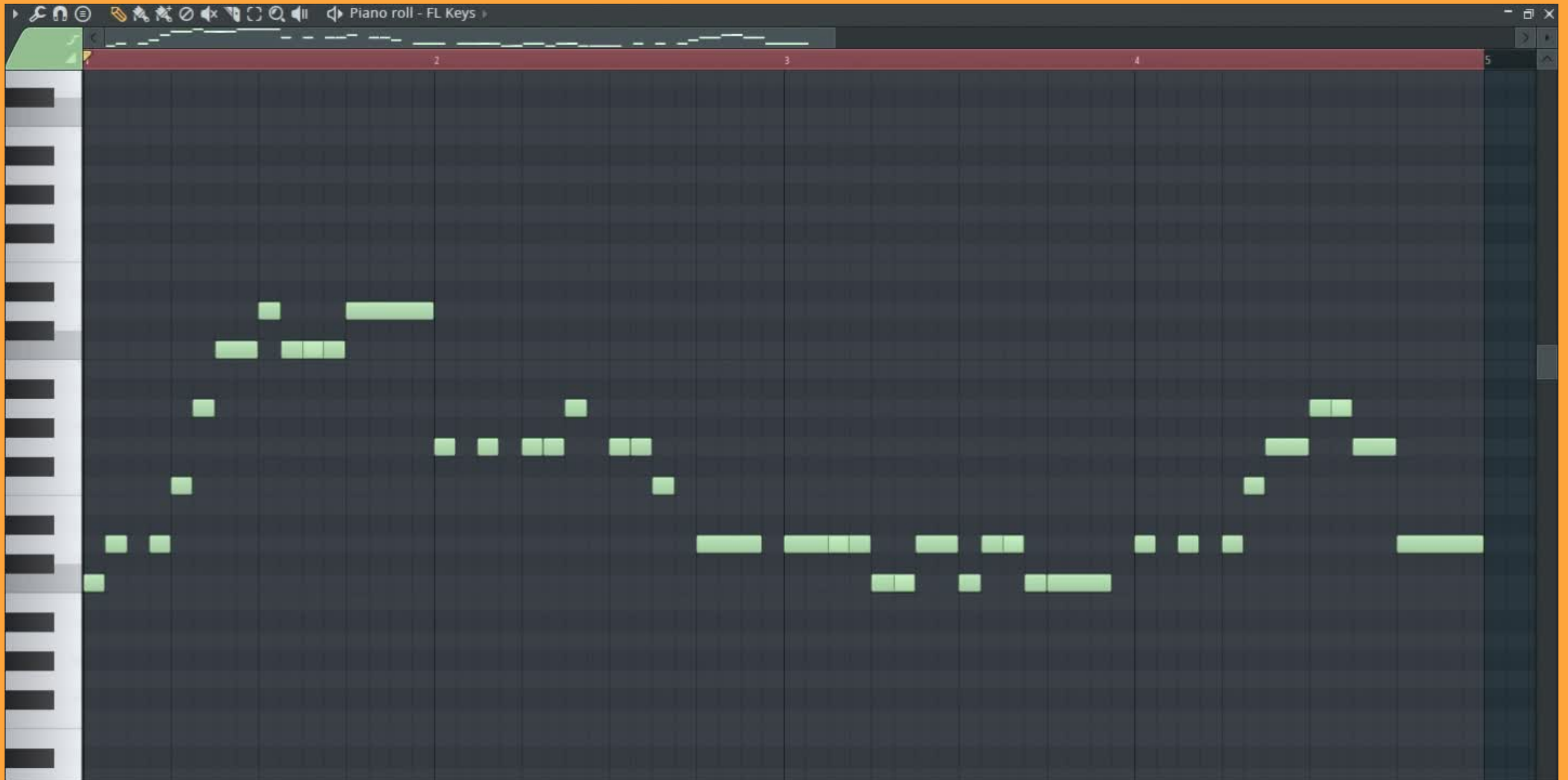


Remember : Prompt + Prediction

Last part of Meldoy was interesting!



Repaired broken Melody Predicted by AI



Just made rough song out of it!



Technologies Used



Tensorflow



GCP



Python



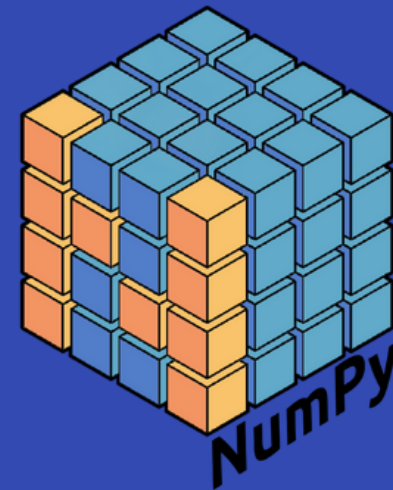
Google Colab



FL Studio



Kaggle



Numpy



Keras

Keras

References

<https://static.googleusercontent.com/media/research.google.com/en//pubs/archive/43905.pdf>

<https://static.googleusercontent.com/media/research.google.com/en//pubs/archive/43905.pdf>

<https://arxiv.org/pdf/1804.07300.pdf>

