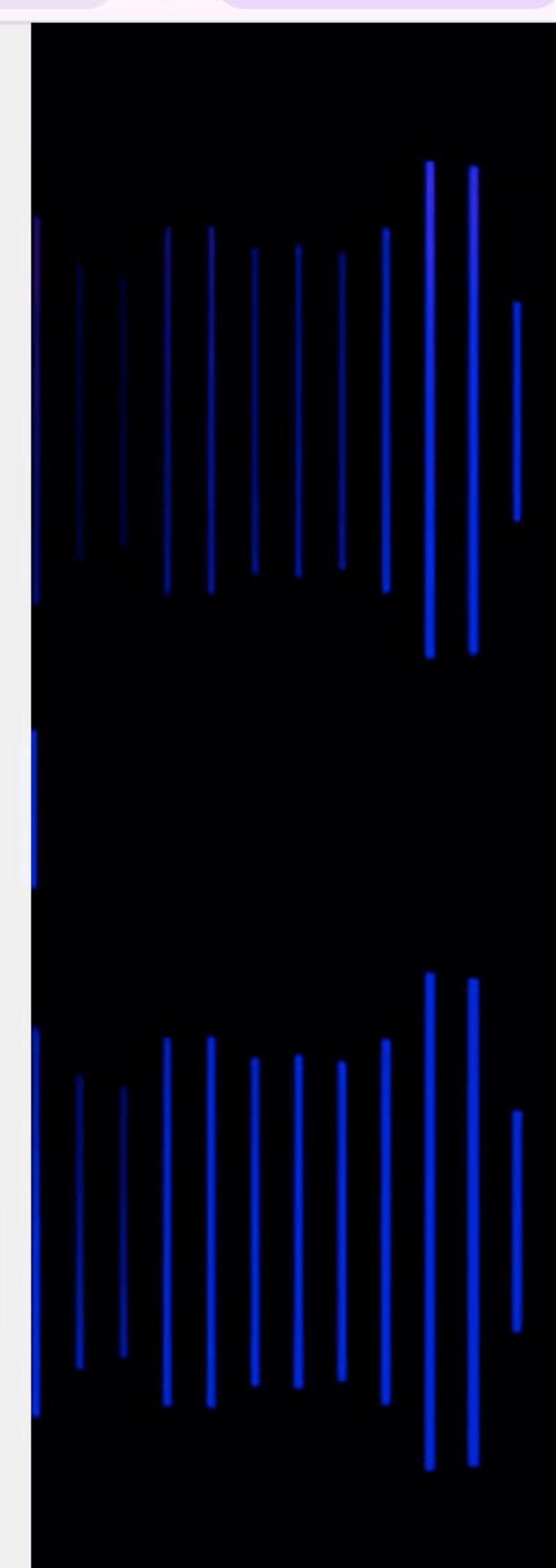


INTRODUCTION

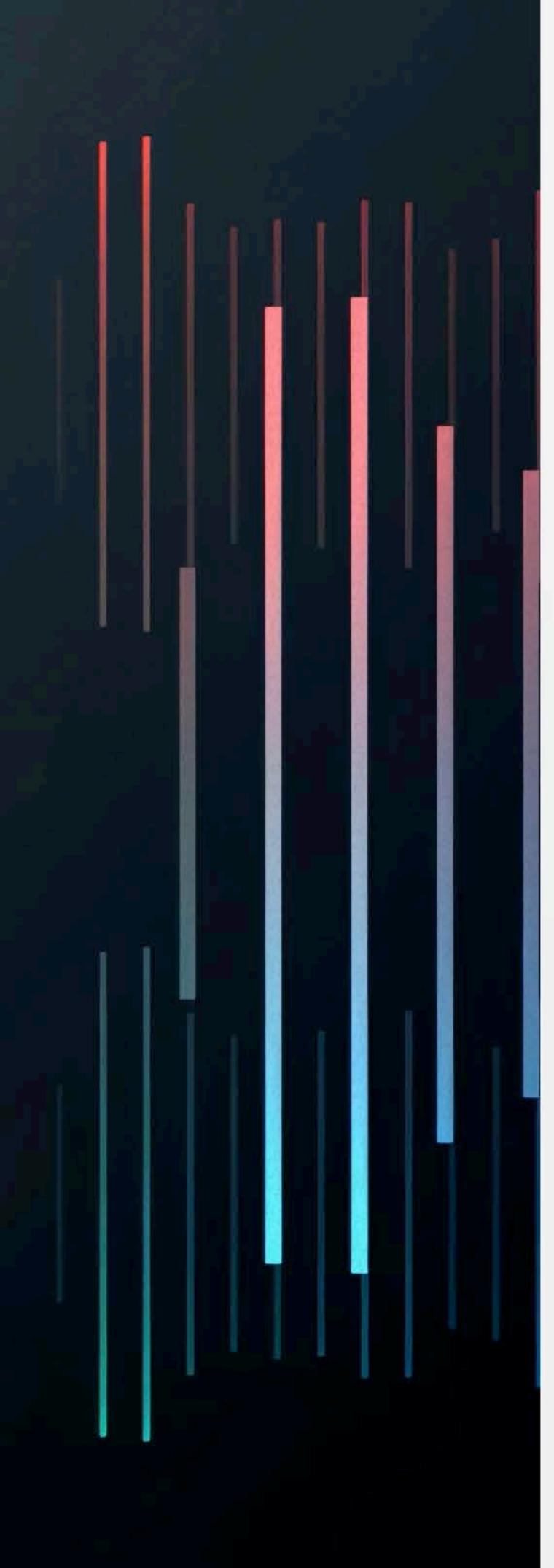
MUSICLDM: ENHANCING NOVELTY IN TEXT-TO-MUSIC GENERATION USING BEAT-SYNCHRONOUS MIXUP STRATEGIES

In this paper, we present MusicLDM, a state-of-the-art text-to-music model that adapts Stable Diffusion and AudioLDM architectures to the music domain. We achieve this by retraining the contrastive languageaudio pretraining model (CLAP) and the Hifi-GAN vocoder, as components of MusicLDM, on a collection of music data samples. Then, we leverage a beat tracking model and propose two different mixup strategies for data augmentation: beat-synchronous audio mixup and beat-synchronous latent mixup, to encourage the model to generate music more diverse while still staying faithful to the corresponding style.

In this page, we present the generation demos of MusicLDM, and the comparison to Riffusion, MuBERT and AudioLDM's generations. Our MusicLDM was trained on Audiostock dataset, which contains 10,000 textmusic pairs with the total duration of 455.35 hours. We show how the generation is on such magnitude of the dataset. All generations are in 16kHz sampling rate and 10-sec length.







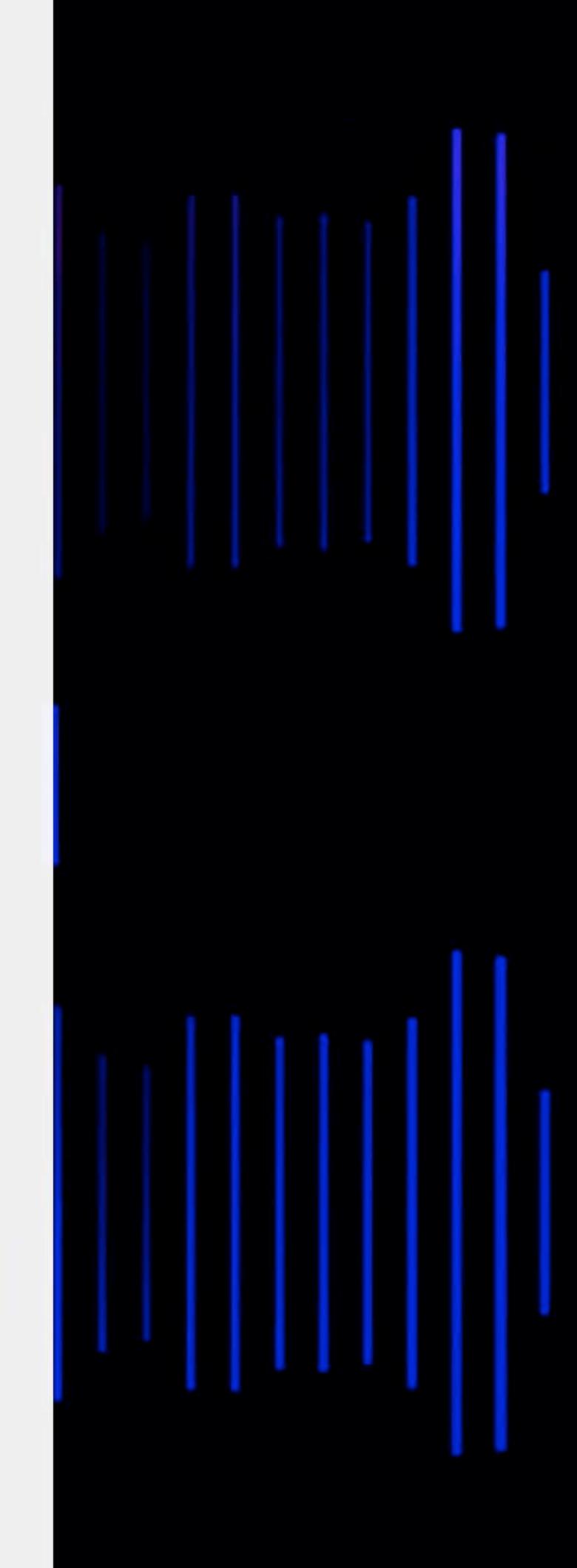
NOW LET'S GENERATE SOME MUSIC

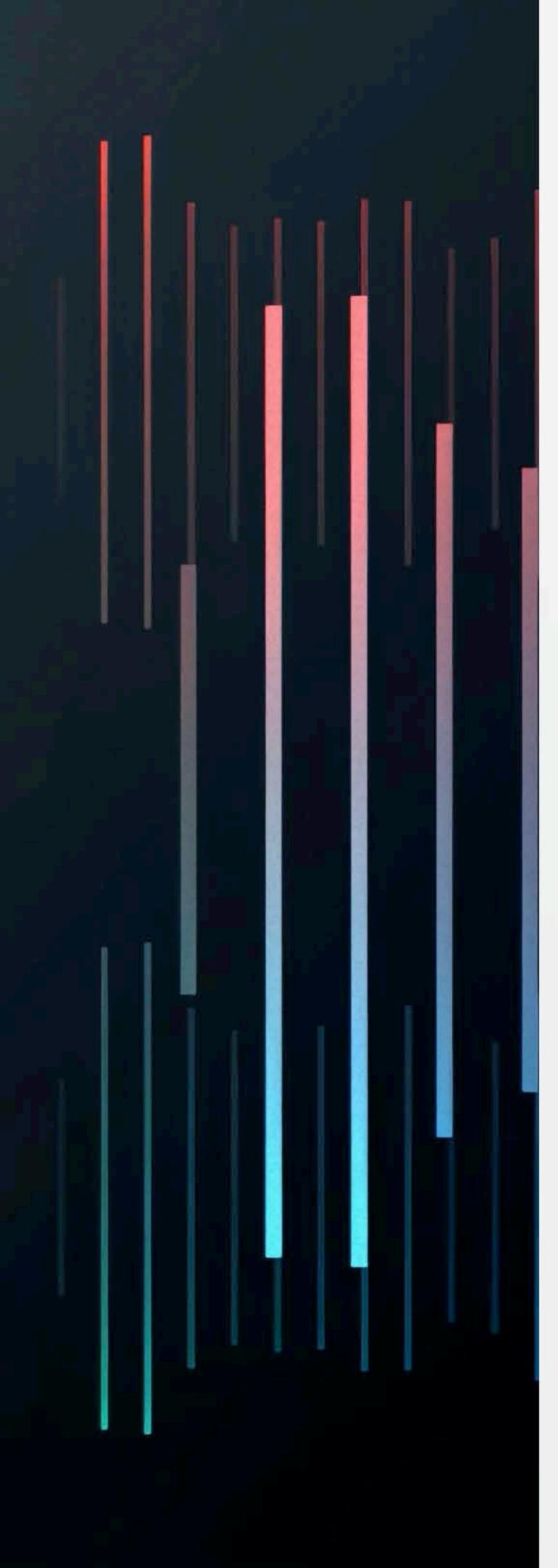
Put in a seed number if you want

Generate a piece of music about...

GENERATE NOW





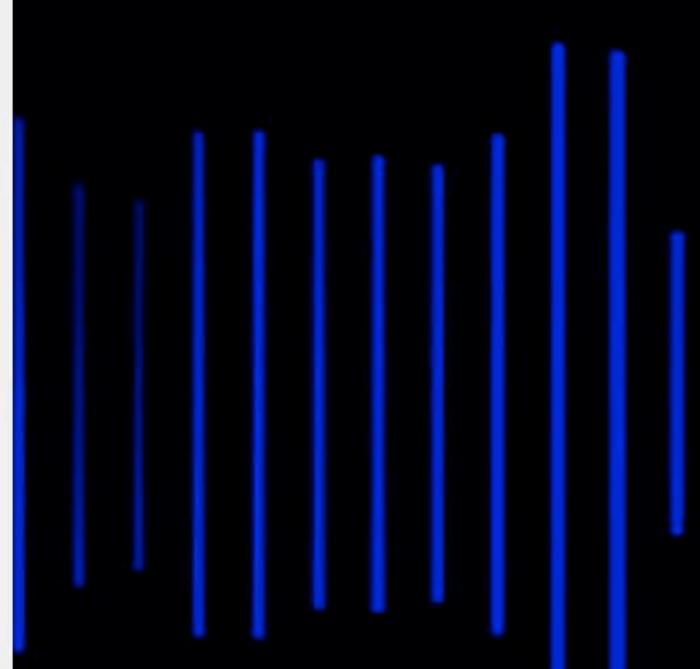


THE 10S MUSIC CLIP BASED ON YOUR TEXT INPUT

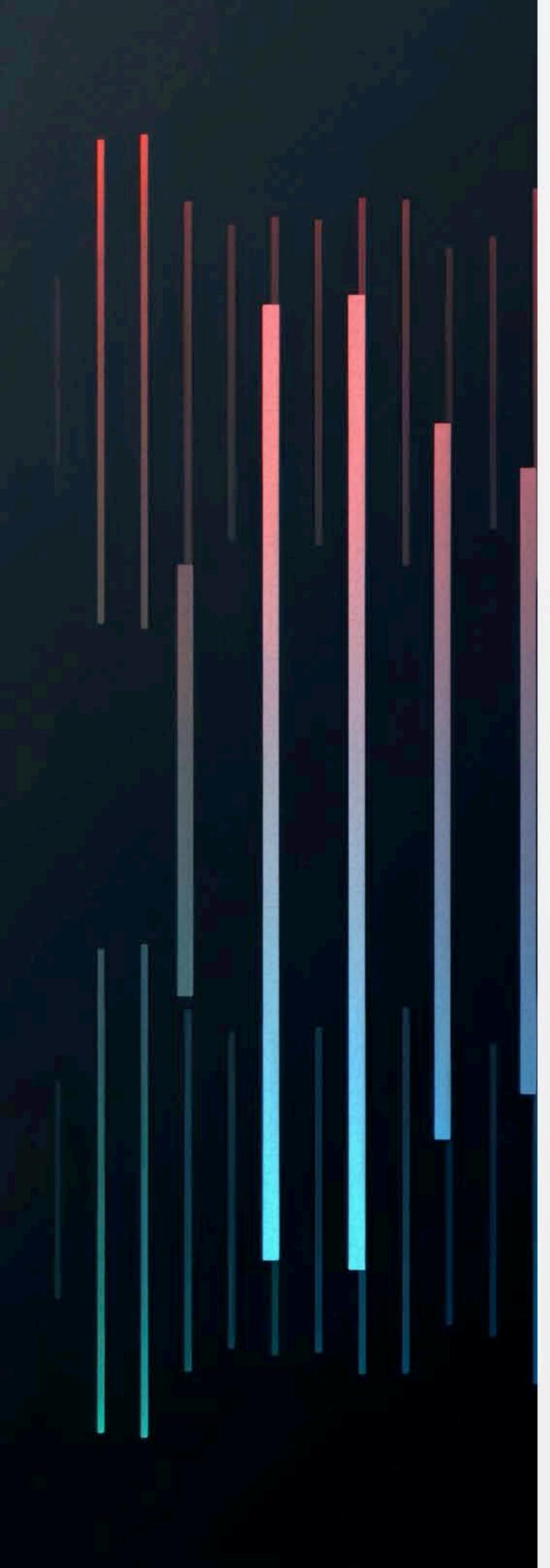
LOAD THE AUDIO FILE

0:00 / 0:10





THANK YOU:) Demo Images: Music LDM © Music LDM Design: Andrina / Xiaoxuan Zhang



SPECIAL THANKS

Thank you to my MUS160B instructor Shlomo and my MUS160A instructor Shahrokh.

Thank you to Ke Chen and Tornike Karchkhadze for help during my process related to the MusicLDM model itself and related background algorithms.

I also gained help from Trevor from our music department and people from ITS on putting this on Datahub (DSMLP access) and setting connection as well as a domain name that I can put into use soon.

