

# Musify- Music Composition using AI

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Artificial Intelligence, Machine learning, Music, Deep learning

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## Brief Description

The Project based on creating an Automatic Music Generation model using LSTM. Automatic Music Generation is a process of composing a short piece of music with minimum human intervention. We used LSTM (Long Short-Term Memory) architectures. Created music using Tensorflow, NumPy, Music21, Sklearn, and Keras.

I learned the basics of python and its libraries. I understand what AI/ML is. Understand the concept behind it. Learned mathematics behind the AI algorithm.

## Progress

In the whole process I learned python efficiently.

I learned the basics of python and its libraries like NumPy, pandas, Matplotlib, and seaborn.

Learning that things help a lot in other work also.

I understand what AI/ML is. Understand the concept behind it. Learned mathematics behind the AI algorithm.

I have learned the application and implementation of python libraries.

We have worked individually.

Then I Learned deep learning basics.

And learn the concept of neural networks.

I have watched a video of Tensorflow.

I referred to the article and all the previous material was helpful in completing the task.

Used libraries like Keras, TensorFlow, and Music21.

Build a model using LSTM for composing music.

The overall experience is very nice.  
I got a great practice of coding skills from the project.  
That helps me in doing other work also.  
I got an introduction to Machine Learning, Deep Learning, and AI from this project.

## Results

Github repository - <https://github.com/Pooja3121/SoC>

Video and

Presentation-[https://drive.google.com/drive/u/1/folders/1Fmd31atzxAZvfwy73Vu25OP3Nq\\_C9nqr](https://drive.google.com/drive/u/1/folders/1Fmd31atzxAZvfwy73Vu25OP3Nq_C9nqr)

## Learning Value

I've learned many libraries in python.  
I got the introduction to Machine learning, Deep learning, and Artificial intelligence  
The project was a great way of practicing coding skills.  
It helps me to get ways to debug the code.  
It was a great experience.

## Software used

Google Colab

## Suggestions for others

Anyone can do this project with help of youtube videos.  
But keep your resources constant and specified.  
For clearing doubts, google search is the best way

## References and Citations

Python - [Python Programming Beginner Tutorials - YouTube](#)

Numpy & Pandas - [Python for Data Science - Course for Beginners \(Learn Python, Pandas,...](#)

TensorFlow - [TensorFlow 2.0 Complete Course - Python Neural Networks for Beginners Tut...](#)

Article:

<https://www.analyticsvidhya.com/blog/2020/01/how-to-perform-automatic-music-generation/>

## Disclaimer

Colab and Jupyter are open-source software.

## Licenses

Made with the help of youtube tutorials.