

### Cover Page

Project Title: Music Generation using LSTM

Student Names and IDs:

Supervisor's Name:

Date of Submission:

Institute/Department: Karlsruhe Institute of Technology (KIT)

### Project Idea (Abstract)

Briefly describe the overall concept, motivation, and the use of LSTM in your project.

### Introduction

Introduce Machine Learning, specifically LSTM, and its relevance to music generation.

### Project Prerequisites

List the programming languages, libraries, and tools used. For example:

- Programming languages: Python
- Libraries: TensorFlow/Keras, NumPy, Music21, Matplotlib
- Tools: Jupyter Notebook, Git, GitHub

### Description of the Project

Detail the dataset, data processing methods, LSTM model, and justification for choosing LSTM.

### Project Goal

Clearly state the main goals and objectives of your project.

### Pseudo Algorithm

Provide a clear and concise pseudo-algorithm for your implementation steps.

### Number of Lines of Code

Clearly present the total lines of code and its distribution:

Data Processing:

LSTM Model:

Training and Evaluation:

Music Generation:

Total Lines:

### **Current Project Status**

Describe clearly the current state of your project. Outline completed tasks and pending tasks.

### **Challenges Faced and Solutions**

Clearly list the technical challenges encountered and explain how they were or will be addressed.

### **Future Steps**

Clearly outline the planned activities and a timeline for the next project phase.

### **Contribution of Team Members**

Clearly specify each team member's specific contributions.

### **References**

Clearly list all references and resources used.

### **Appendix**

Include additional details such as code snippets, diagrams, or supplementary material if needed.