RHYTHMUS

What is Rhythmus?

- Rhythmus is a web application that creates piano pieces similar to a selected musical piece using AI.
- We used LSTM machine learning algorithms for music generation process.
- We created a server application in order to store user information with Python Django and MySQL.
- We created a web application with Flask and python. However we haven't deployed the server and web application yet.

LSTM

- In the first semester we created a working LSTM network but it wasn't functioning as we desired. It was underfitting to a single note.
- In the second semester we enlarged the model and the training data set. Also we found a way of using existing data more efficiently.
- This way the model became capable of detecting small changes in an input sequence and act accordingly. Therefore we eliminated the underfitting problem.

Website

- We used Python to write the music generation code so we decided to use python while creating the website as well.
- We used the Flask library to create and manage our endpoints.
- We styled these pages with css.
- Website isn’t deployed.

Server

- We are running a server on a specified host which stores user information (id, email, password).
- We used MySQL for database server.
- We used Python Django framework for the user database..
- Server is queried every time someone tries to login or signup.

Project Timeline

- First semester we worked on the machine learning models but we couldn’t finish them.
- In the first part of the second semester we continued working on the machine learning algorithms and perfected them.
- Then in the second half of the second semester we started working on the website and the server.

Thank you for listening