

DEEP MUSICIAN

AUTOMATIC MUSIC GENERATION USING DEEPLARNING

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Music Generation

- Create a model that can automatically generate music
- Train the model on a large dataset of existing music
- Use the model to generate new, unheard music of arbitrary length

Preprocessing - get the data in shape

- Use symbolic representation of music
 - Midi Files
 - Piano roll, that captures the notes played at each time step

Architecture

- Sequence aware encoder-decoder architecture
- Each consist of a two-layered GRU
- The encoder encodes the input sequence at once
- The decoder generates the output sequence step by step according to the previous ones

Sequence 2 Sequence

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RESULTS

- Unfortunately the results are not very good

Preprocessing

- Endless possibilities to represent the underlying data
- The model is not able to learn the rhythm of the music
- The model is not able to learn the melody of the music