

In this research, we have designed and implemented a deep neural network that can generate dance movements based on music input. The model is given as input STFT (Short-time Fourier Transform) of the audio signal and generates dance poses corresponding to it. The network uses a series of fully connected layers to process the audio and a series of LSTM (Long-short Term Memory) layers to predict dance poses. We also introduce a custom loss function based on Laban Movement Analysis, a theory to describe human movements like dance that penalizes the network when the energy of the generated movement is not matched the ground truth. The network is able to generate long sequences of dance motions for pieces of music it was exposed to during the training, however when using the custom Laban loss function, the network shows a possibility for improvement in the result.