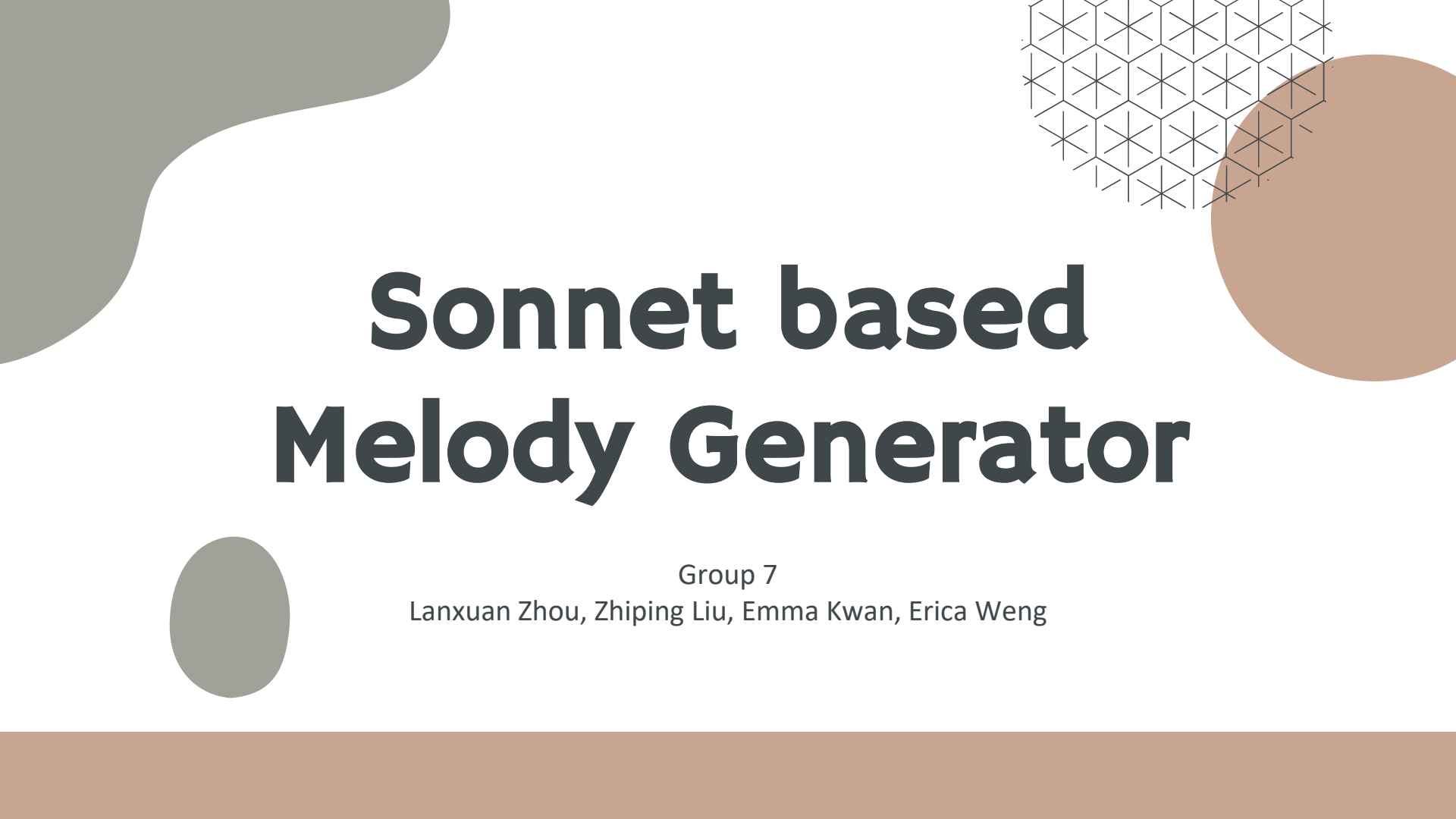




Sonnet based Melody Generator

Group 7

Lanxuan Zhou, Zhiping Liu, Emma Kwan, Erica Weng

About Us

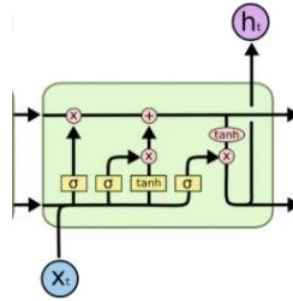
- Lanxuan Zhou
 - Master of Information Systems Management (MISM), Heinz College
- Zhiping Liu
 - Master of Information Systems Management (MISM), Heinz College
- Emma Kwan
 - Information Systems, Dietrich College of Humanities and Social Sciences
- Erica Weng
 - Robotics Machine Learning, CMU Robotics Institute

Introduction

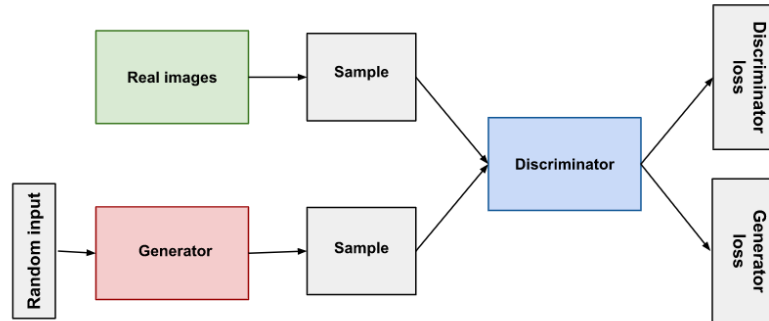
- We created a sonnet and melody generator that generates melodies based on the syllables of each line of the generated sonnets
- Providing musical additions to the sonnets can help bring new perspectives and understandings to the lines since we're interested in rhythm

Related Works

- LSTM

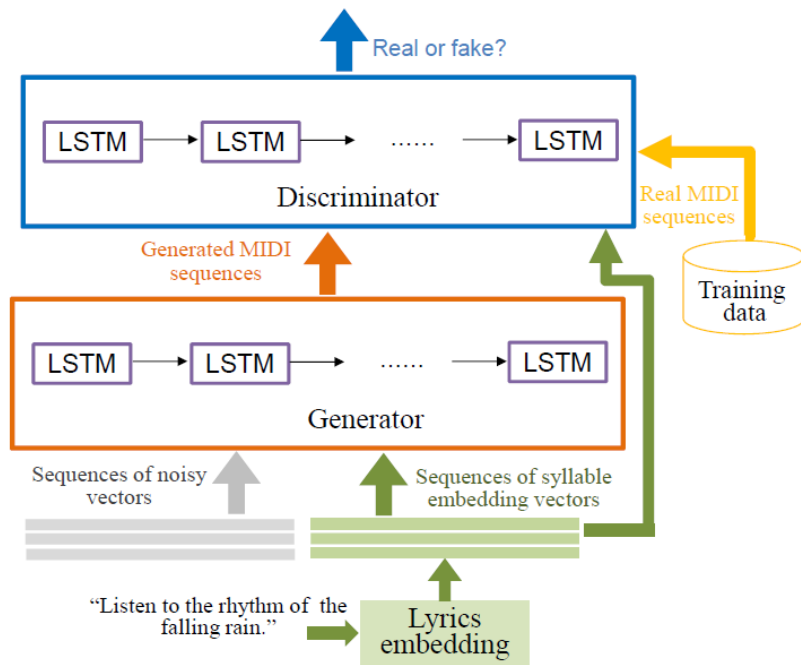


- GAN

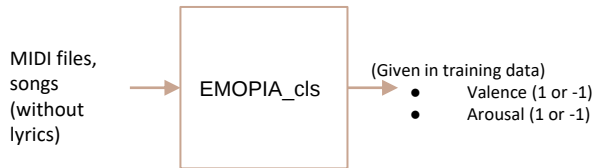


Models

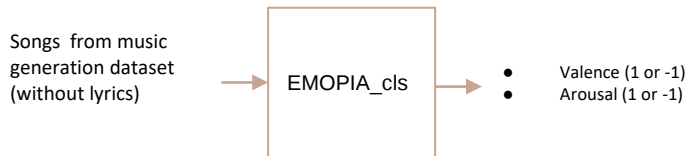
- LSTM-GAN



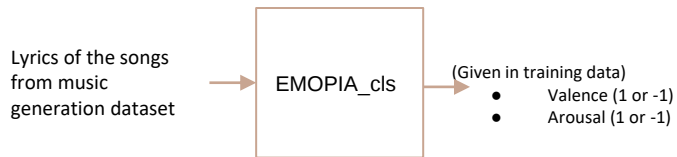
Training the emotion classifier



Obtaining emotions for the music generation dataset



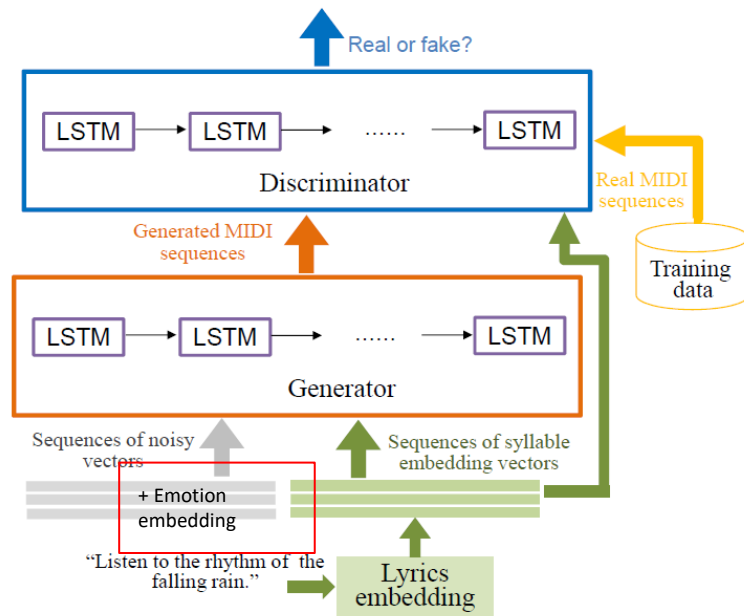
Training the lyric emotion classifier



Obtaining emotions for the sonnets



Emotion Dataset



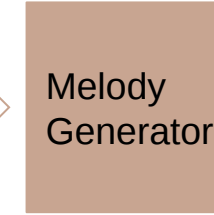
Pipeline

(Our Project 3)

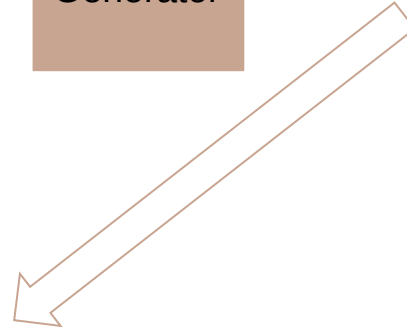
Random Input



Sonnet

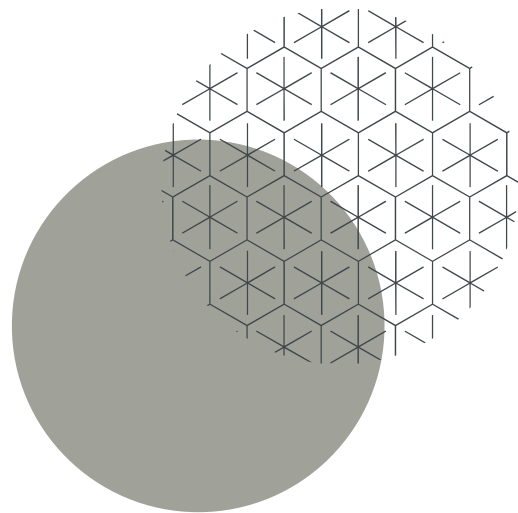


Melodies



Web App GUI





Demo



Future Improvement

- Training better word-to-vector embedding models with sonnet vocabulary
- Training LSTM-GAN based on the new emotional-conditioned dataset
- Modifying training settings to make the trained model accept longer inputs



Thanks!

Q & A

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