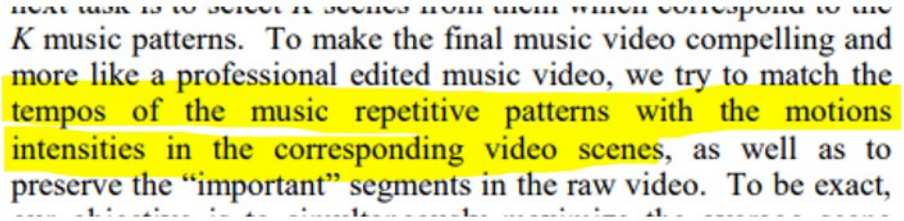
07-08-2019

2019年7月8日 14:45

Outdoor Video
Home Video
Music video
不涉及音乐的改编，只涉及音乐的选择

1. 基于audio track和video track repetitive pattern
2. Patterns matching



next task is to select K scenes from them which correspond to the K music patterns. To make the final music video compelling and more like a professional edited music video, we try to match the tempos of the music repetitive patterns with the motions intensities in the corresponding video scenes, as well as to preserve the "important" segments in the raw video. To be exact,

Future works:

1. 鼓点的确定
    a. Shot transtion：hard cut / soft cut
    b. 内容：
        i. Emotion detection
        ii. Camera motion detection
2. 如何利用鼓点（❌）
    a. Hard cut卡在重音上
    b. Soft cut
    c. 渐变的场景过渡：渐强渐弱
3. 鼓点部分音乐的特征
    a. 骤停：
    b. 音量：
    c. 变速：
    d. 变调：

强弱
和弦
变调
快慢
节奏

MV generation

2019年7月12日 21:37

- （Shot boundaries detection）
- Emotion detection
- Camera motion detection

1. Video analysis - **attention detection**
   video **segmented** into shots first, then an "importance" value of each shot is calculated by averageing the "attention index" of each video frame, in which the attention index is the ouput of "attention detection". Also we can obtain more information following: **camera motion, motion intensity, color entropy.**

<A User Attention Model for Video Summarization>

2. Music analysis
   onset detection and **rhythm estimation**, **repetitive pattern discovery**
3. MV generation
   videos clips and music matching

Music structure analysis

2019年7月12日 22:19

- Repeating pattern discovery
  STRUCTURAL ANALYSIS OF MUSICAL SIGNALS VIA PATTERN MATCHING
  Repeating Pattern Discovery and Structure Analysis from Acoustic Music Data

- Music boundary detection (perception)
- Music closure postive shift (CPS)
- Music phrase perception
- Audio segmentation
  Automatic Audio Segmentation: Segment Boundary and Structure Detection in Popular Music
  Structural boundary perception in popular music
  MUSIC BOUNDARY DETECTION USING NEURAL NETWORKS ON COMBINED FEATURES AND TWO-LEVEL ANNOTATIONS
  MUSIC BOUNDARY DETECTION USING NEURAL NETWORKS ON SPECTROGRAMS AND SELF-SIMILARITY LAG MATRICES: CNN & dataset

- Music generation
  MySong: automatic accompaniment generation for vocal melodies

Future works

2019年7月16日 9:36

Emotion -> tonality (tempo)
Motion: intensity -> tempo, transition
Camera motion: intensity -> music transition
Segmentation: shot transition: hard cut, soft cut, emotion/motion transition
(cut at some points like hard cut, continuous time <= a strong beat)

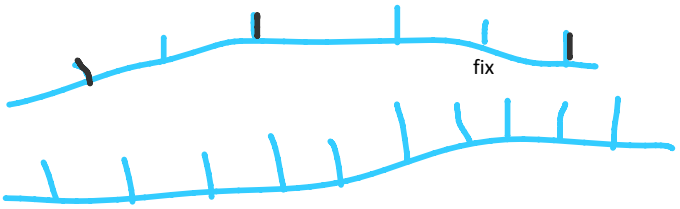
Multimodal Emotion Recognition in Response to Videos

What is drumming? Strong beat in specific meter

1. Quantitative evaluation for music generated, drumming & sound effect
2. Cut point for drumming and sound effect

1. Music segmentation

2 Music features



[type: hard cut, time: ms, beat]
[]
[]
Dataset
mo