A Survey of Music Emotion Recognition

Donghong HAN, Yanru KONG, Jiayi HAN, Guoren WANG

Frontiers of Computer Science, DOI: 10.1007/s11704-021-0569-4

Contributions & Problems

- Main contributions of this paper
  - Gives a detailed analysis of music emotion recognition research papers, especially papers that use deep learning technique.
  - Points out the challenging problems and future development trends of music emotion recognition
- Current challenges
  - Current emotion models cannot accurately quantifying the richness of music emotion.
  - Current audio and lyrics features are not extracted according to the characteristics of music.
  - There is a lack of large-scale diversified emotion-labeled music datasets in the music emotion recognition field.
  - Quantitative works on how to apply music concepts and theory knowledge on music emotion recognition are few.

Main Conclusions

- There are urgent needs for authoritative large-scale diversified datasets and more accurate emotion models. Music concepts and carefully designed features are also needed.
- The music emotion recognition field is shifting from static processing to dynamic process, from single modal to multi-modal and from traditional machine learning models to deep learning models.
- More technologies such as transfer learning and knowledge graphs, more information like the singing voice, social tags, album cover data, and MV data can be explored, and ideas from related fields can be borrowed.