Researchers create adaptive classification method for electronic music

March 21 2024, by David Bradley

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A new method for classifying electronic music has been developed by

researchers in China. The approach offers a novel solution in an age of exploding digital content to curating music libraries and streaming services.

Writing in the *International Journal of Arts and Technology*, Hongyuan Wu and Lin Zhu of the College of Music at Chong'qing Normal University, explain how such services are currently overwhelmed in terms of valid classification methods.

Traditional approaches are simplistic, based on labeling, and not keeping up with modern use and tastes. The team points out that classifying electronic music by genre is particularly difficult as this broad genre has wide and diffuse boundaries between different styles that are often highly subjective and influenced by cultural nuances.

The team's new approach uses a complex decision tree framework to achieve high accuracy and speed up processing times, making a leap from 33-and-a-third to 45, you might say. The process starts with noise removal using principal component analysis and then segments the track into small chunks. The features from each chunk are then extracted using a method known as short-time Fourier transform. The team then fine-tunes their decision tree model to achieve the most precise classification possible.

Indeed, their tests have shown that their method can be very effective, with a classification accuracy up to 98.6%. The implications go far beyond academic interest, with potential applications across the music and other industries. Music streaming services and online libraries rely heavily on accurate genre classification and could take advantage of this new approach to allow them to organize their collections and market music more subtly to their users. Users might include everyday music fans or those involved in the media or elsewhere who need specific styles of music to accompany their creative outputs.

For instance, the classification approach should make it easier for everyday users to explore music, discover new sounds or retrieve golden oldies. In marketing and advertising and other areas, understanding music preferences based on genre classification is critical for targeted campaigns based on music taste.

Provided by Inderscience