陪伴機器人之基於情感辨識音樂播放器系統
Emotion-Based Music Player for Companion Robots

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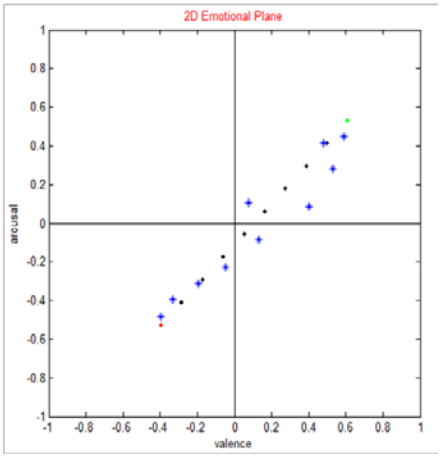
In this work, a novel human-machine interaction system is proposed where emotional recognition from the speech Signal is used to create an emotion aware music player that can be implemented on a standard smartphone-like embedded platform.

This strategy allows the system to automatically select a piece of music from a database of songs, in which emotions are also expressed using arousal and valences values. Furthermore, a cheer-up strategy is proposed where in case the detected emotional content is detected as negative, music songs with varying emotional content are played in order to cheer-up the user to a more neutral –happy state. The system has been implemented in a popular inexpensive embedded platform Beagleboard XM which uses an electret microphone and a touch screen panel as input from the user. The proposed system can be used in human-machine interface applications like companion robots, car sound systems and communication devices like cellphones, where music can be played according to user's emotional state.

A screen capture of the music player



Example of the system output for an input utterance whit bored emotional content. Songs played are blue numbered asterisks.

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