

Environmental Sound Classification based on Time-frequency Representation

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This paper proposes a feature extraction method for environmental sound event classification based on time- frequency representation such as spectrogram. There are three portions to perform environmental classification. Firstly, the input signal is converted into spectrogram image with time-frequency representation using short time Fourier transforms. Secondly, this spectrogram is used to extract features with local binary pattern of three different radius and neighborhood sizes. The three distinct features resulted from local binary pattern based on spectrogram are concatenated and used as one feature vector. Finally, multi support vector machine is used for classification of environmental sound event. Evaluation is tested on ESC-10 dataset.