

Abstract

Tone is an irregular sound produced by an object or instrument or human voice, the result of resonance on the certain sound frequency. Tone has a certain scale frequency in Hertz (which can be heard by human ears is about 50-20,000 Hz). If the frequency is higher so the tone was higher too.

Short Time Fourier Transform (STFT) is a developed algorithm from the Fast Fourier Transform (FFT). Commonly, STFT is used to analyze a non stationer signal. STFT algorithm will acquire the input signal within a certain range of time t . Initial input signal is still in the frequency domain. For sampled signals, STFT uses window function which is placed at the first signal for each different frequency.

The concept of SVM can be described simply as an attempt to find the best hyperplane that has function to separate two classes in the input space. Classification problem can be interpreted as an attempt to find a line (hyperplane) that separates between the two groups. In this case the hyperplane is the best separator between the two classes that can be found by measuring the margin hyperplane and looking for maximum points. Margin is the closest distance between the hyperplane to the pattern of each class. The closest pattern is called a support vector.

In this Final Project has been analyzed, so that this system testing has 75.21 % level accuracy.

Keywords: window, STFT, SVM, tones frequency, and tone