PerfectPitch

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Abstract

Fourier transforms and frequency domain analysis are being used to generate music scores from an audio sample. A Frequency Signature Algorithm has been developed that takes the result of applying a fast fourier transform (FFT) to the audio input and compares the frequencies with different frequency signatures to separate the audio by instrument. Frequency domain analysis is performed on the separated input to find peaks corresponding to the pitch in the audio sample. The frequency peaks are matched to their corresponding music notes, which are used to generate the music score.