

Melody Transcription from Polyphonic Music using MIDI Data Mining

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Abstract

This paper presents a melody extraction algorithm using note statistics which are gathered from a large collection of MIDI files. The purpose of this investigation is to see whether a statistical model trained on a data set of several thousand songs improves melody extraction algorithm performance, and if so, which features lead to the most improvement. Features tested include note magnitude, note pitch, inter-onset interval, pitch trajectory, spectral centroid, and vibrato presence. This was compared against a baseline algorithm that maximizes the note magnitude within a limited pitch range.