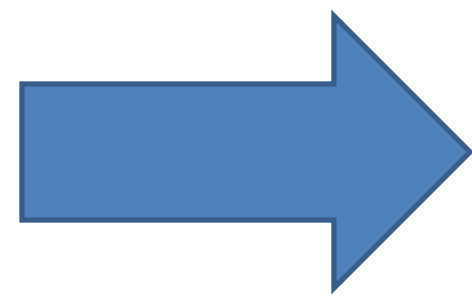


Automated Instructional Aid for Reading Sheet Music

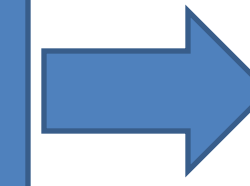
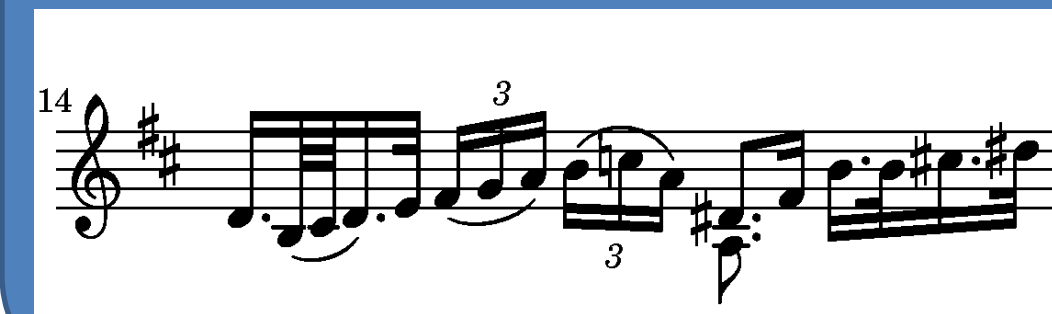
Albert Ng, Asif Khan

Department of Electrical Engineering, Stanford University

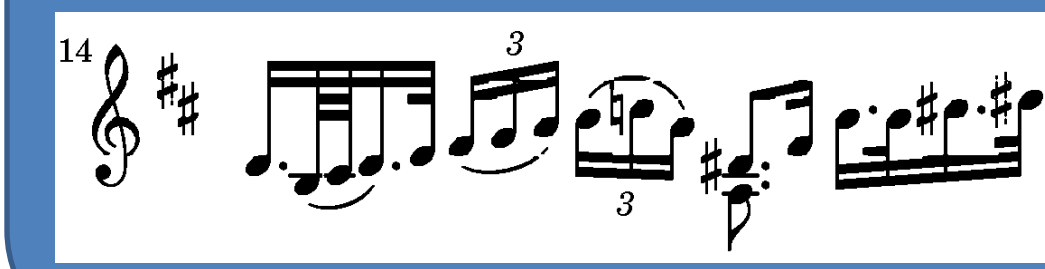
Motivation



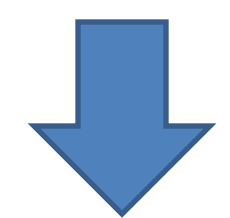
Binarization



Staff Line Removal

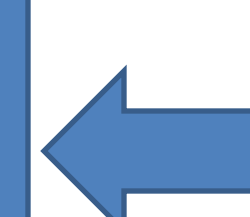
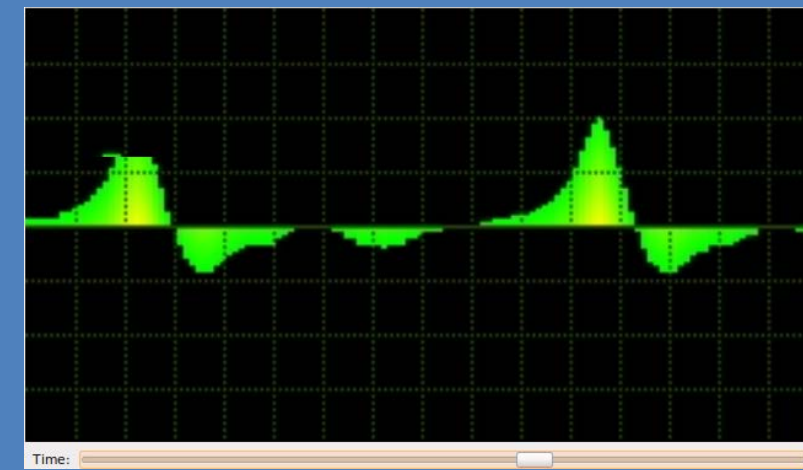


Symbol Group Segmentation

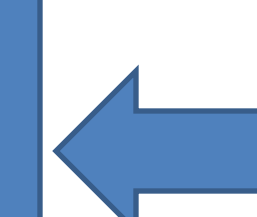
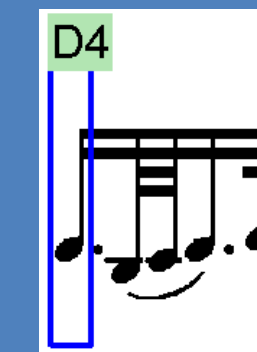


Processing Pipeline

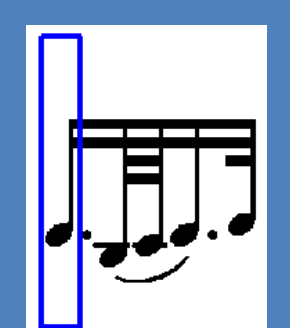
MIDI Synthesis



Note Recognition



Note Segmentation



Experimental Results

Jingle Bells

False Positives: 0
Detected: 49/49 (100%)
Classified: 49/49 (100%)

Allegretto

False Positives: 9
Detected: 323/334 (97%)
Classified: 323/323 (100%)

Twin-kle, twin-kle, lit-tle star, how I won-der what you are!
Up a-bove the world so high, like a dia-mond in the sky.
Twin-kle, twin-kle, lit-tle star, how I won-der what you are!

False Positives: 3
Detected: 42/42 (100%)
Classified: 34/42 (81%)

Future Work

