

Optical Character Recognition for Musical Notes and Playback

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Abstract—OCR for music recognition and playback aims to address the problem of music data acquisition. It accomplishes this by using OCR to recognize the music score and converts it into MusicXML file format. MusicXML file is the industry standard way of representing western musical notation. The conversion of the recognized symbols to MusicXML file format enables the user to store, edit, play and share his music. The main motivation behind the project is to develop software like “Cam Scanner” for musical score sheets that can be used by learners, professional musicians and publishers with ease. The character recognition has been implemented through template matching using normalized cross correlation. The Music table of recognized symbols with (x,y)coordinates, staff number, duration, stem, octave, step and alter is generated, which will be helpful to test the correctness of the recognized symbols. Currently 10 different instruments such as guitar, violin, mandolin, melodica, banjo, koto, kazoo, electric guitar, sitar, mezzo-soprano are supported for music playback by using Muse Score software. The implementation was done through in Matlab(version R2014a - 8.3.0.532).

Keywords—OCR, MusicXML, Cam Scanner, Template matching, Normalized cross correlation, Matlab.

I. INTRODUCTION

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II. CONCLUSION

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APPENDIX A

PROOF OF THE FIRST ZONKLAR EQUATION

Some text for the appendix.

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