

SHEET MUSIC READER

ABSTRACT

The aim of the project is to make a software using principles of image processing to play music given a snapshot of the music sheet, ie, the music notation. This will involve mainly basic note playing and not include advanced symbols but on a variable tempo.

THEORY OF IMPLEMENTATION

Using techniques of image processing, the sheet music can be interpreted and converted to synthesizer readable formats like .mid. This is very cheap and barely costs anything.

IMPLEMENTATION STEPS

- 1) We process the image, detect parallel horizontal lines.
- 2) Detect associated vertical lines and hence conclude what note it is.
- 3) Write the concluded information into a .mid file.

TIMELINE

Week 1: Come up with a program to detect the evenly spaced horizontal lines and a bar of music.
Week 2: Improve the program to detect notes
Week 3: Further improve the program to detect note durations
Week 4: Note duration detector ready
Week 5: Convert the info to .mid
Week 6: Buffer Week

COMPONENTS REQUIRED

Laptop with openCV

COST ESTIMATE

Zero

SALIENT FEATURES

- 1) Cheap, first of its kind sheet music reader.
- 2) Great help for beginners and intermediate piano students.