

ECE Capstone 438:38 Spring 2016

Music Scanner App ()

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ABSTRACT

Introduction:

The Music Scanner App is an intermediary tool that is designed to create a facile manner for novice, intermediate or expert musicians to recreationally sample their sheet music. We are aiming to introduce this application on the Android OS and believe it will be a very useful aid in any musically interested person's arsenal. It is a perfect way for anyone to be able to test out sheet music and familiarize him or herself with how a piece of music sounds. Since music is such an integral part of our lives, we all believe that this application will be well received.

Motivation:

Music is an important part of a person's life; it allows one to express his or herself and provides plenty of entertainment. The Music Scanner App allows one to listen to his or her favorite sheet music through the phone by simply taking a picture and having the phone play it out loud. The application also has educational purposes; if a person is trying to learn how to play music on a piano, they might not know how part of the music sounds. With the application handy, this wouldn't be an issue because the phone will play those parts to guide the user in the right direction.

Software Design Plan:

We plan on designing our App for the android platform through the Android Studio IDE. Our initial plan is to build an App that is capable of taking a picture of the music sheet, and saving the picture into a folder in the phone as a JPEG file. Once the picture is saved we want to be able to process the picture by scanning for notes in a sequential manner. Once the scanning is done the output of the process will be a MIDI file that plays the notes in a sequential order.

Conclusion:

Since there are many mobile users today, having a quick and easy resource like a mobile application will help users learn how to play music on the spot by listening at the notes being played to you. It is a way to promote music appreciation through technology.