

## **Phantom Sight Reader**

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### Abstract

“Phantom Sight Reader” is the future of music playing. It captures an image of sheet music from an external camera and produces an audio output matching the sheet music. It is comprised of three components: image capture, note recognition, and audio production. Image capture involves interfacing a camera with the FPGA and capturing a still image to memory. Note recognition involves identification of whole notes, half notes and quarter notes and the position on the treble clef in one octave. Audio generation involves generating tones similar to those that would be played on a real instrument. The final goal of the project is to be able to recognize notes from regular sheet music and produce tones as if it were played on a piano.