



Smart Player Piano

J A S O N P A W L A K

Advisor:
Dr. Anca Ralescu

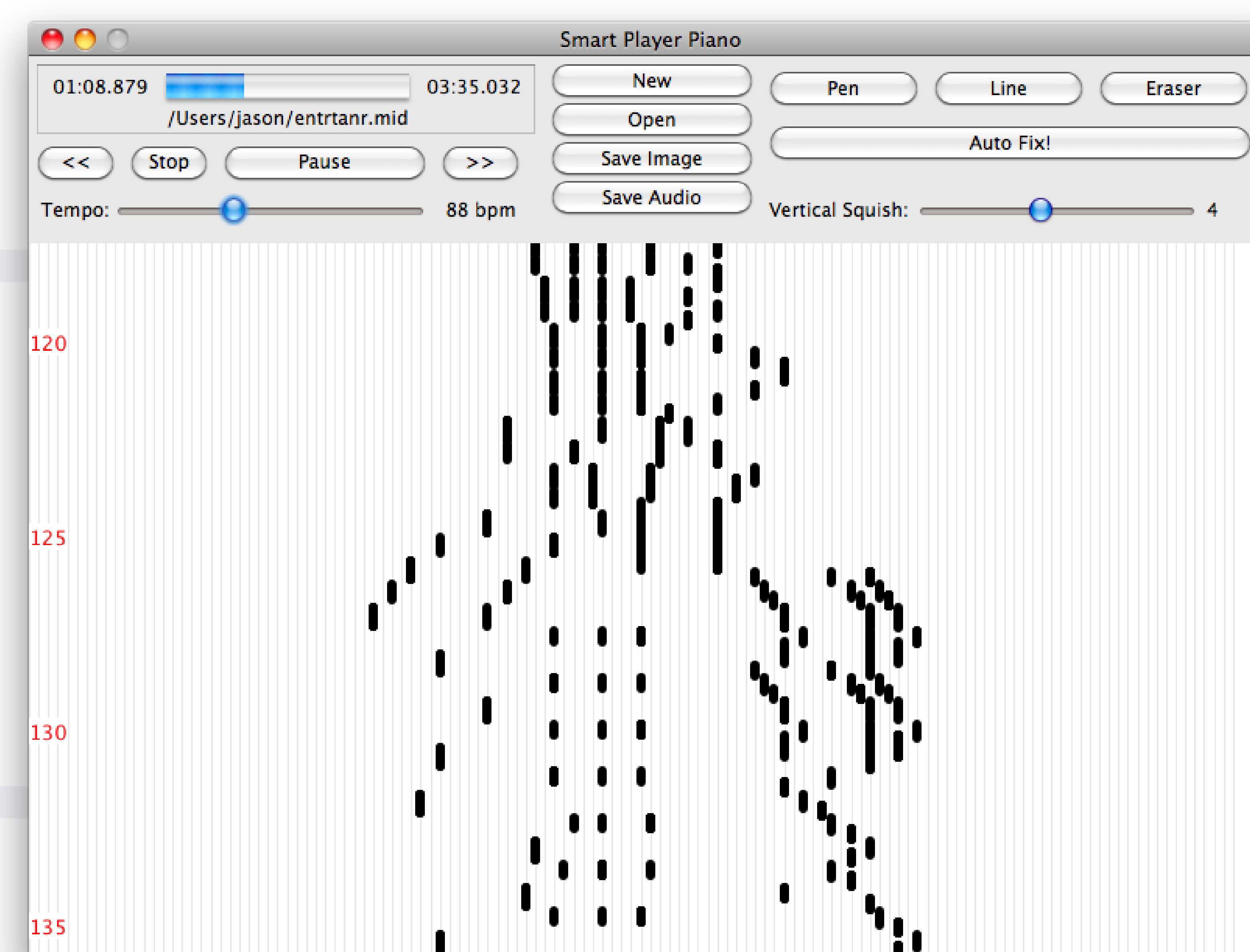
Description:

An application that combines visuals and audios into an amalgam of art for both the eyes and ears.

Goals:

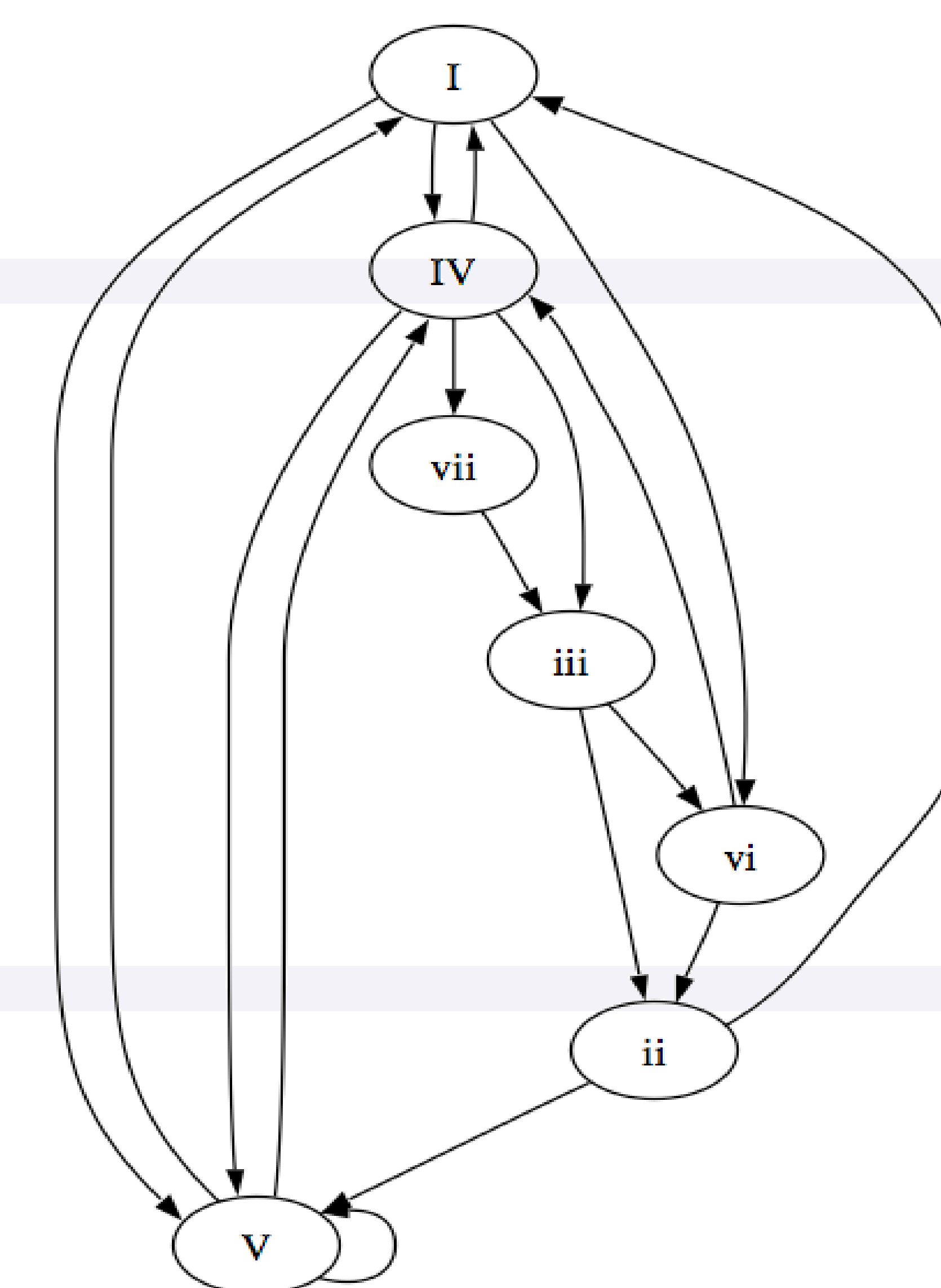
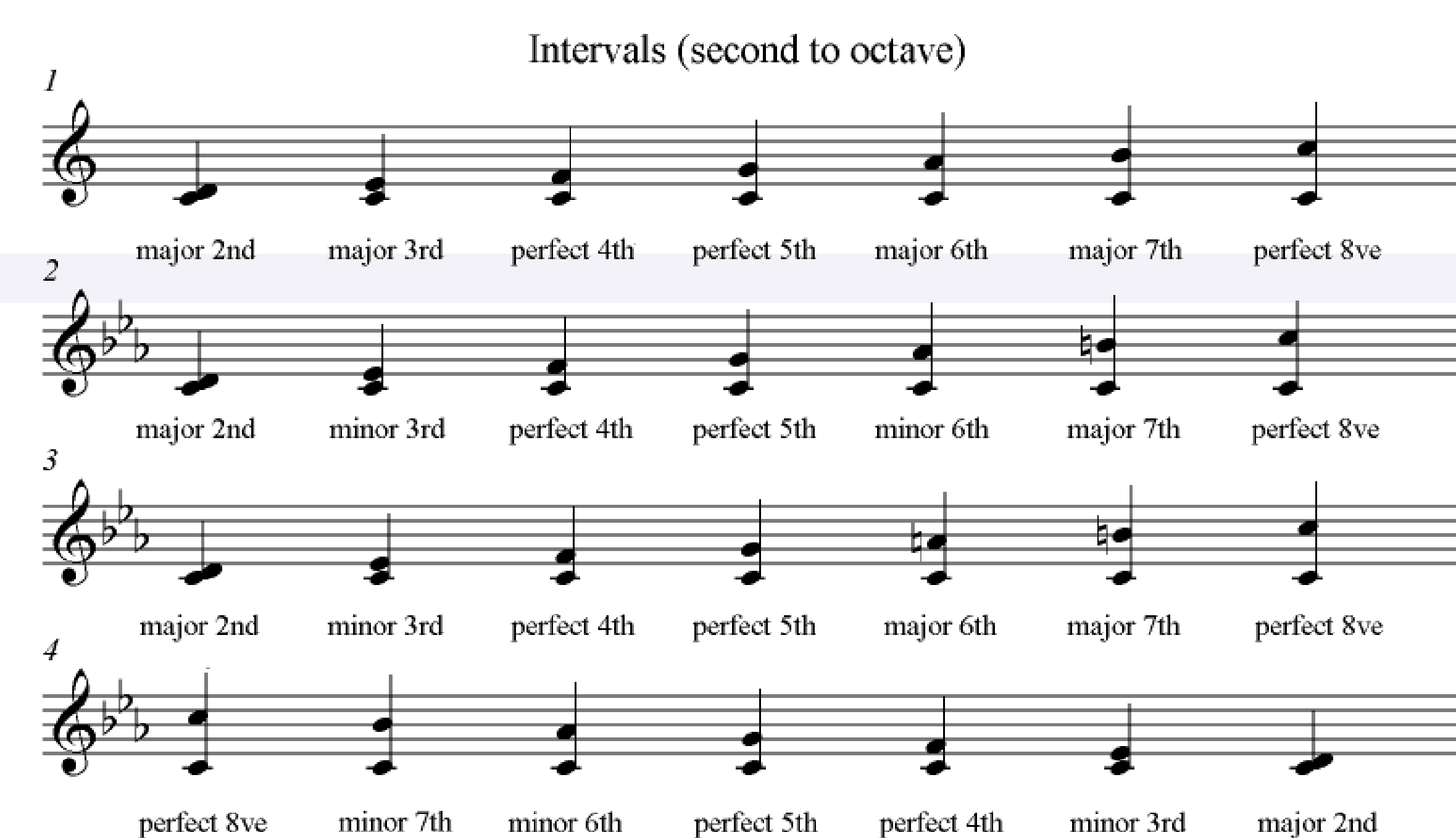
1. Create an intuitive application for a user of any age
2. Allow users to import MIDI files to listen and view 2D representation
3. Allow users to import BMP files to listen and view
4. Allow user to create a new piece of music/ piece of 2D art and view it and listen to it

Results!



How music theory works...

- Set of 7 notes make up a key
- Certain notes when played together sound better than other notes played together
- The distance between two notes is called an interval
- Three notes at specific intervals from each other make a chord
- Specific chords sound best played after other specific chords



Player Piano?

- Powered by person pushing pedals!
- Vacuum detects where holes on scroll are located
- Holes further to the right are higher pitch than holes further to the left



MIDI?

Stands for 'Musical Instrument Digital Interface.' A file that contains data for a digital synthesizer to play a song

Smart?

The application will analyze an image that has been imported or created and make minor adjustments based on basic music theory to make the music sound 'pleasant' to the ear. Otherwise a random drawing could sound 'garbled.'