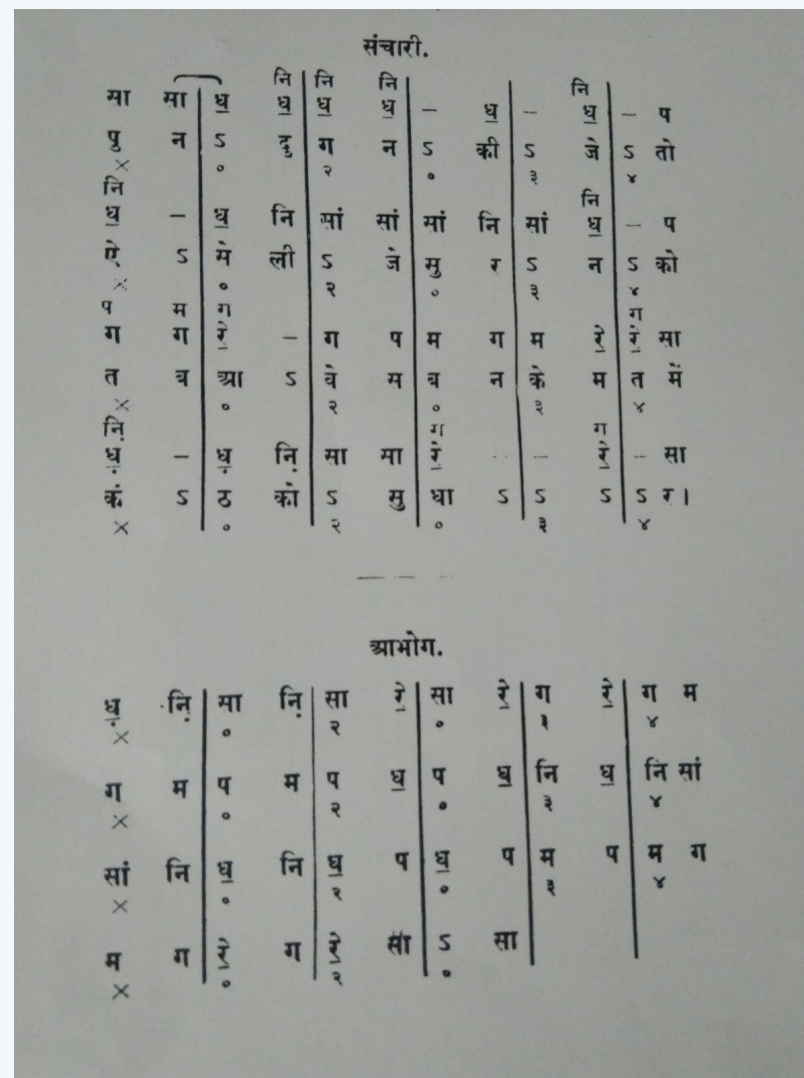# Extraction of melodies with pitch classes from images of HCM compositions in Bhatkhande notation
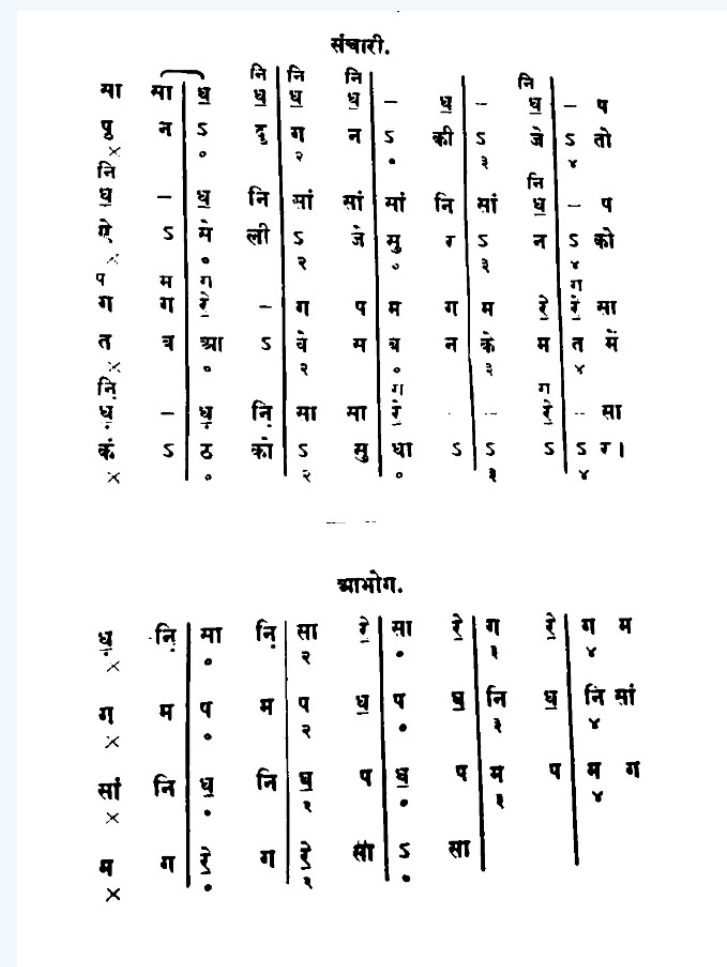
Conversion of Music Notes from images of Bhatkhande Notation System into MIDI file(audio file) involving Images Processing using OpenCV, Deep convolutional neural network modeling using Tensorflow and Keras and extracting those notes to be converted into a playable audio file using music21 toolkit for computer-aided musicology.
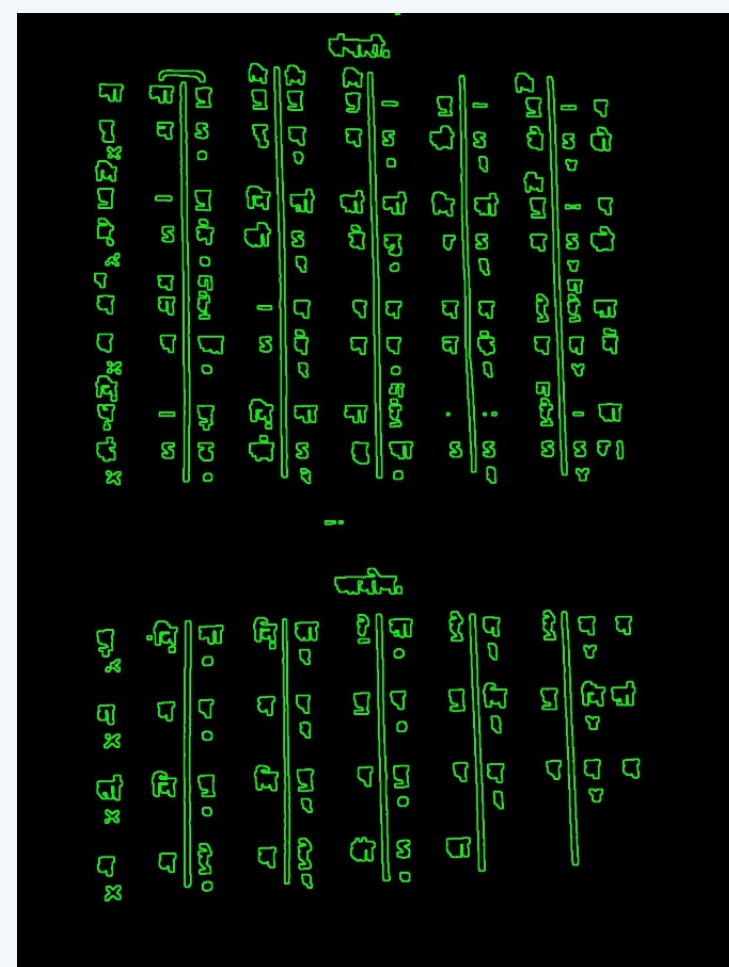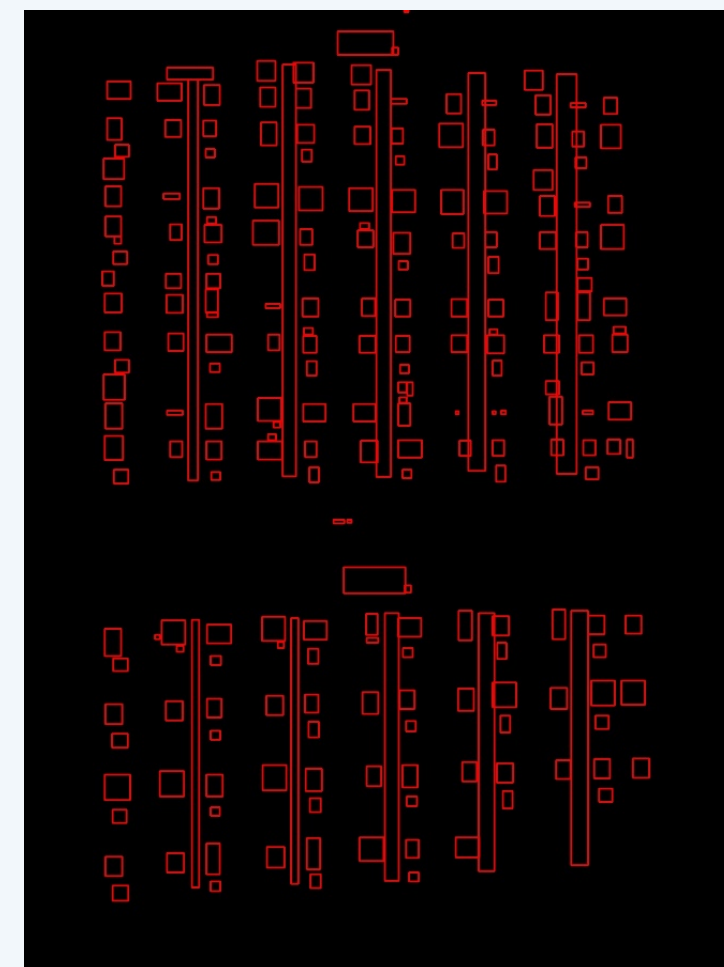
Text Extraction
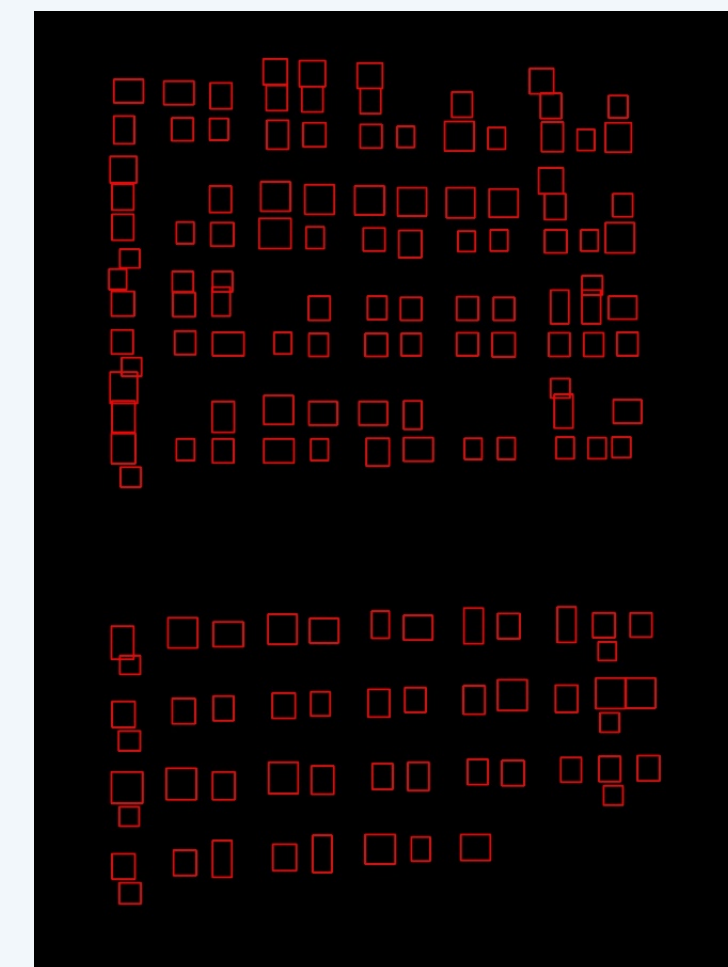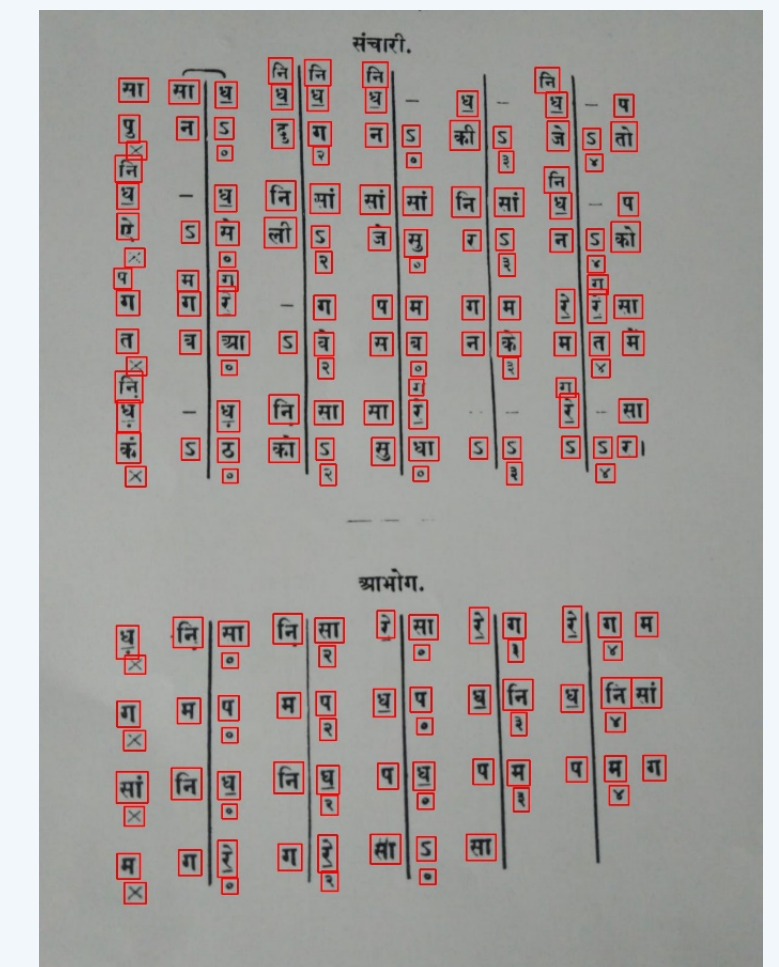
Text Classification

Audio Conversion

1. Binary converted

2. Contours drawn

3. Bounding Rectangles

4. Filtered Rectangles

5. Extracting Notes

We receive:

- Rescaling (32 X 32)
- Scaling (0->255)
- Grayscaling

Deep CNN Model

music21

MIDI File