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Computer Vision Project Proposal

For this final project, we are looking at doing a musical character recognition project. This will be able to recognize a page of simple music fed to it and detect what notes are on the page. It will also have the ability to play back the notes of the music to the user. This will allow us to determine how accurate our coding and recognition is. We will be implementing this by using ORB and matching the notes between reference images and the sheet music. The data that we will be using include reference images of each note and a sound file of the note so that it can be heard by the user. Since all sheet music is presented as black and white, will also explore binary image techniques for note, rest, and staff-line recognition. Our timeline will look like this:

Date:	Task to be completed:
11/6/20	Start gathering images and sheet music to be used for our code. Determine the scale of music that we want to work with, start with the coding portion of the project
11/13/20	Work on the code, expand and adjust the project requirements as needed. Have the different notes for identification and the code should hopefully identify 1 note correctly.
11/18/20	The progress report including the results so far, problems, and plans is due.
11/20/20	Continue work on the code. Will hopefully have code that detects notes in succession, just not 100% accurately yet
11/27/20	Work on the code, try and have a working algorithm that can detect notes accurately by this point and play the music.
12/2/20	Finish the presentation and wrap up any unfinished major missing features in the code
12/9/20	Final Report and video are due, those will be completed and uploaded