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Proposal:

The game I am trying to create is a game in opencv that takes a song and isolates the rhythms and produces a rhythm game. It will shoot out arrows from the bottom of the screen and progressively make their way to the top of the screen following the music rhythm. When the arrow reaches a specific spot on the top of the screen, the user needs to use their hands to hit the arrow for points. Every time they hit the arrows on time, 10 is added to the score and the more they hit in the row, the more the score will increase. Using aubio I will have beat detection so that I can create a game out of any song given. I would also have to implement threading to run opencv and aubio and pyaudio “at the same time”. I would first start out with detecting color like the color of skin or maybe a singular color and track it. Then I would do collision testing with the tracking of the color and something on the screen. Then I would figure out the music and how to implement the beat detection algorithm. Then I would see how it outputs numbers and take those numbers to create the game itself. Once getting the actual game, I would need to implement threading to have the game and the music running at the same time. I think the hardest part will be trying to figure out how to use the numbers I get from aubio regarding the music and beat detection.

Update 1:

Arrows are now changed to different colored circles.

For now, it is changed to detecting colors red and blue that need to be held in each hand instead of the hand itself.

Update 2:

I made it so that it shows when you have a streak. If you have a streak of 10 or more, your score will increment by 1.3x more than it was previously incrementing. I also added different modes: easy, medium and hard and also made it so that you can input your own songs to play.