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Throughout this past week, I've primarily focused on formalizing my vehicle detection algorithm and resolving a file conversion issue. Currently, I am structuring my vehicle detection algorithm such that I can output a video showing how the vehicle confidence "boxes" change with each frame. The following images show how my algorithm detected different "vehicles" between different frames (25th and 30th).

Frame 25

Frame 30

Observing the video will allow me to determine whether my algorithm is able to detect the same vehicle(s) the entire time which is essential to being able to detect vehicular *crashes*. As of right now, I am able to detect only a subset of the visible cars on a frame-by-frame basis. I have no way of knowing the accuracy and consistency of this algorithm without being able to see video output. In order to do this, I used OpenCV's video writer to convert my numerical frame array into a video file. However, I have encountered many problems with this procedure. Most notably, OpenCV's video writer outputs a ".avi" video file that can't be read by my computer. I tried converting the file to a ".mp4" file using numerous online file converters, but none of them were successful. In the future, I am going to work on fixing this problem so that I can view the video output from my vehicle detection algorithm. Specifically, I will attempt to use other image array to video conversion libraries such as skvideo. Overall, although I faced a few setbacks this past week, being able to see how the accuracy of my vehicle detection changes throughout the crash video will enable me to improve my algorithm.