CMSC 421 Project Proposal

GROUP MEMBERS:

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PROJECT DESCRIPTION:

For our final project, we will create an image / video classification program based on YOLO that will attempt to locate and identify airplanes (or other vehicles) in a video.

The program will train on the set of images and gather information on airplanes from these images. With this information, it will attempt to both locate and identify airplanes in different sets of videos.

(Adopted from:)
8. Finetuning Image Classification (ML: Neural Networks):
Finetune existing imaginenet-trained models on classes of images of your choice.
Links: https://pytorch.org/tutorials/beginner/transfer_learning_tutorial.html

FINAL FORMAT:

The program will run as a command line tool where users supply the path to a video and the program creates a new video with a bounding box and prints a description of the object in the video. If time permits, we will create a simple UI that will allow users to upload videos and display results. This would potentially contain elements such as an area allowing paths for both the input and output videos to be selected, a progress bar for the processing of the video, and a way to decide the name of the output file.