Assignment 04 - Transfer Learning and Bounding Boxes and YOLOV8

Start Assignment

- Due Monday by 11:59pm
- Points 30
- Submitting a file upload
- Available Feb 13 at 5:20pm - Feb 26 at 11:59pm

Part1: Using available pre-trained models for object detection, conduct inference on a short video (5-10 seconds) of a street scene drawing bounding boxes around detected vehicles.

Step 1. Collect a source video. It may be necessary to divide the video into discrete image frames.

Step 2. Conduct inference on each frame of the video, drawing bounding boxes around detected vehicles.

Step 3. Format the results back into a video.

Use either Pytorch or Tensorflow.

Upload a .zip file containing your .ipynb notebook containing the code utilized and two video files: before inference (without bounding boxes) and after inference (with bounding boxes)

part 2:

Follow the steps in YOLOV8 and attach a screenshot of object detection

Windows: https://medium.com/@pat.x.guillen/a-step-by-step-guide-to-running-yolov8-on-windows-122cb586b567 (https://medium.com/@pat.x.guillen/a-step-by-step-guide-to-running-yolov8-on-windows-122cb586b567)

Mac: **https://pysource.com/2023/03/28/object-detection-with-yolo-v8-on-mac-m1/ (https://pysource.com/2023/03/28/object-detection-with-yolo-v8-on-mac-m1/)**

buttery fly dataset: use ~10 images from

https://universe.roboflow.com/yolo-a6y21/squid-bat-butterfly (https://universe.roboflow.com/yolo-a6y21/squid-bat-butterfly)

You can also try butterfly video and detect objects. (do not submit it)