

There will be no final exam this semester, instead a final project will take its place. The topic of this semester's final project will be **Human and Object detection**. Based on your student ID, you will be assigned different sets of objects. (refer to Target_Object.xlsx for your object set assignment). For each frame of the video you must display your detection result, **(number of detection and type), and your student ID** in real time. (refer to "sample_output_videos"). You will need to turn in a **detection result video, source code and a report**. There is no limit on the methodology of this assignment, however it is recommended that you use a pre-trained model. The method used in the sample video is based off of <https://github.com/qqwweee/keras-yolo3>, where a yolov3 model is transformed into a keras structure before performing the detection, followed by a program to show the number of object and human detected onto the detection video. The sample video serves as a baseline, better detection results will be given extra credits. For example: at 0:03 of the sample video "person_horse.mp4", it shows that only 1 person is detected, hence if you are able to detect more people than the sample video, it indicates that your detector performed better than the baseline. If there are any questions, feel free to contact the TAs.

You must turn in the following:

1. Your detection result video, the video must show the human and object detection count and your student ID.
2. A PDF report, describing your detection method and source code.
3. (Optional) If your detector performed better than the baseline, please include how it performed better in your PDF report.

Note: if your file is too big, you can give us a link to your cloud storage (Google Drive.. etc).