**מדריך להפעלת רשת YOLOV4 על JETSON TX2:**

**דרישות:**



**הורדת הרשת:**

1. git clone https://github.com/AlexeyAB/darknet.git
2. git clone https://github.com/avivpaskaro/drones\_project\_yolov4\_nn.git
3. cp ./drones\_project\_yolov4\_nn/\* ./darknet/
4. Download weights into darknet folder-

**YOLO 320X320:** https://drive.google.com/file/d/110cYGgU5lA1Jdj1a1nuDyVbDc6iq\_BHY/view?usp=sharing

**YOLO 416X416:** https://drive.google.com/file/d/1nLzVdx2llWd4oBnEyvvSRtFFvYPjyhhL/view?usp=sharing

**YOLO 512X512:** https://drive.google.com/file/d/1COKM\_HfefGoE\_tUVnkpf4e5j6zCw0MRv/view?usp=sharing

**YOLO 608X608:** <https://drive.google.com/file/d/1mww1NgBP_dfmh2JeRACX8rIUIWnOdNVO/view?usp=sharing>

\*\* The following is the mean average percentage for each network size (FPS is getting lower as yolo size increased):

**320X320 mAP 65%**

**416X416 mAP 77%**

**512X512 mAP 83%**

**608X608 mAP 87%**

1. Download test video into darknet folder for checking the net-

**test2:** <https://drive.google.com/file/d/1stfZl-zn6wuOLQRvATd4D3OhpLozGip6/view?usp=sharing>

**הפעלת הרשת:**

1. cd darknet
2. make
3. chmod 777 darknet\_run
4. ./darknet\_run

**פרמטרים לריצה:**

שורת ההרצה נמצאת בתוך הקובץ darknet\_run. את הפרמטרים ניתן לשנות בתוך הקובץ לפני האפשרויות הבאות:

--input - takes webcam number or video input path (webcam=0 if empty)

--out\_filename - takes out video file name (not saved if empty)

--export\_logname - takes out log file name

--weights - takes yolo weights path

--dont\_show - hide window inference display

--config\_file - takes path to config file

--data\_file - takes path to data file

--thresh - takes value to remove detections with confidence below (thresh=0.25 if empty)

--capture\_frame\_width - define the camera frame width

--capture\_frame\_height - define the camera frame height

לדוגמה (ריצה):

python3 -u darknet\_video.py --data\_file obj.data --config\_file yolo608-obj.cfg --weights yolo608-obj\_best.weights --thresh 0.25 --dont\_show --input test2.mp4 --export\_logname results.txt --out\_filename out.mp4